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Jorma Ahvenainen

THE HISTORY
OF STAR PAPER
1875–1960

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Preface

The idea of writing a separate brief history of Star Paper was born in 1970—1972, when the author was engaged in writing the history of the Kymmene Company. He then became acquainted with the activities of the two British paper mills because in 1930 Kymmene purchased a majority shareholding in the Star Paper Mill Company and in the following year Star, in its turn, purchased the Yorkshire Paper Mill, situated in Barnsley. At that time no history of either paper mill existed, and in the case of the Blackburn mill research into the early years of the Roddlesworth valley paper mills had to be carried out especially for the Kymmene history. Furthermore, the purchase of shares in Star made Kymmene the first Finnish industrial enterprise to operate abroad; at present there are about 600 Finnish firms doing so, Kymmene still being one of the most active. Against this background, the history of Star is also in a sense the history of Finnish capital invested abroad.

While engaged on this work, the author also found that very little has been written on the history of the British paper industry which used wood as a raw material. However, as there was already material available, obtained from exclusive sources, it was all the easier to decide to write a short history of Star Paper.

This work is almost completely based on original archive material which, especially in the case of the Barnsley mill, but also in the case of the Blackburn mill, has been preserved in a very incomplete form; this partly explains the brevity of the history. When searching for information on the Roddlesworth Valley mills the author found the following sentence, which refers to one of these mills: "... the said company be dissolved ... and

it is ordered (at the court) that the Books, Accounts and Documents of the Company other than the file of Proceedings be destroyed by burning". The author is only too well aware of the fact that badly preserved archives have restricted the basis of this research.

The work ends with the year 1960, not because nothing important has happened to the company in the last fifteen years but because a historian feels out of place where the most recent events are concerned. It is, however, worth mentioning that Kymmene still owns almost the entire share capital of Star.

The original Finnish text has been translated into English by Mr. and Mrs. Anthony May, to whom the author is grateful both for a good translation and for good co-operation. The author wishes to thank his colleagues Mauno Jokipii and Erkki Pihkala for reading the manuscript and recommending it for inclusion in the Studia Historica series, and he is also grateful to the publications committee of the University of Jyväskylä for accepting this research for publication.

Blackburn, December 1975

J o r m a A h v e n a i n e n

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I Star before the First World War

1. The founding and early years of the Star Paper Mill

The Star mill was founded in 1875 at Feniscowles in the Roddlesworth Valley, swelling the number of Lancashire paper mills in an area which was already known for its paper industry.

This area was geographically very suitable for a paper mill: the high rainfall and the swift-flowing rivers provided pure, soft water; the abundant coal resources were important from the point of view of the mill's power and heating needs; and, in addition, the rivers and canals of the area facilitated the transport of both raw materials and finished products. Other factors had influenced the siting of the paper industry in this county, the most important being the large cotton industry of Lancashire, which provided a suitable raw material for the paper industry in the form of its waste textile material; one is almost tempted to think that these waste-materials at times demanded the founding of a paper mill. Furthermore, the nearby large towns with their potential markets meant that the paper mills were in an exceptionally advantageous position; the growth of the towns and the development of an urban way of life were extremely important factors in the expansion of the Lancashire paper industry.¹

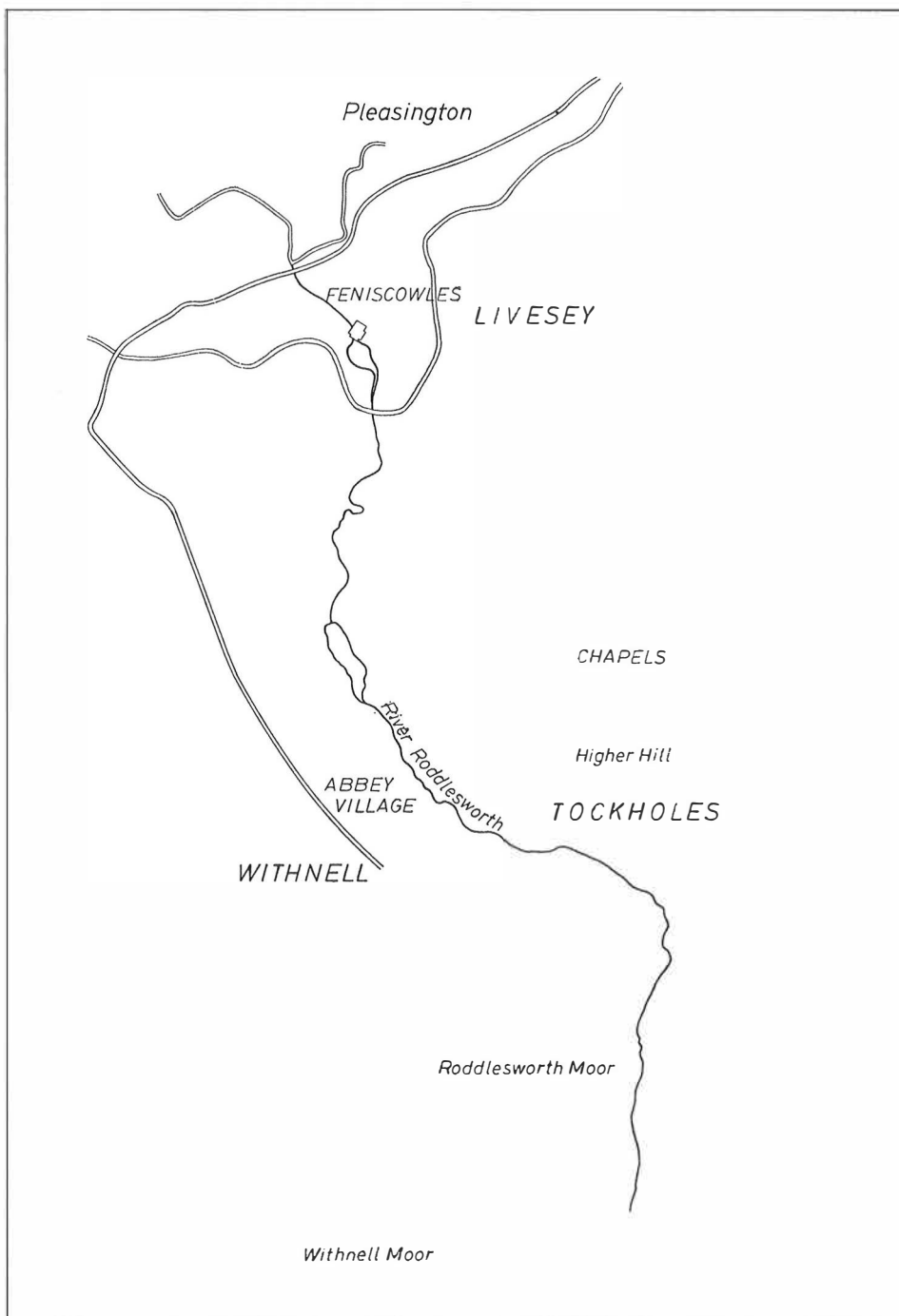
The River Roddlesworth had its source in the bogs of Withnell and Roddlesworth about 4 miles south of Feniscowles. It was not a large river in spite of its swiftness, and where it joined the River Darwen at Feniscowles it was only a few yards wide. In the mid-nineteenth century the river no longer flowed freely, for it had to a large extent been harnessed for man's uses; the waters of the Roddlesworth were fed into the Leeds—Liverpool Canal, which by about 1810 already stretched from Liverpool as far as Blackburn.² In 1848, Liverpool Corporation purchased large areas of land, forming the water catchment in the upper Roddles-

worth Valley, dams were constructed and three reservoirs formed — Rake Brook Reservoir in 1857, Higher Roddlesworth Reservoir in 1867, and Lower Roddlesworth Reservoir in the same year — an overflow allowing surplus water to continue on the river course down the Lower Roddlesworth Valley.³

In the 1870s gentlemen who were not only interested in the local pub started appearing around the lower reaches of the Roddlesworth. Their purpose was to find a suitable location for a paper mill and the founding of paper mills became a characteristic of the Roddlesworth valley at the beginning of the 1870s.

In September 1873 a company named Feniscowles Paper Mill Co. Ltd. was founded with the object of establishing a mill and producing and selling paper. One of the founders was the manufacturer, Josiah Gregson, mentioned later in greater detail, a man with a very central position in the company. The mill was built in Feniscowles, on the lower reaches of the River Roddlesworth. The company was not very successful in its operations; in 1877 the company suffered a loss of £3,500 and at the beginning of the 1880s the mill's operations were very limited. However, the mill was saved by a new company, The Sun Paper Mill Co. Ltd., founded in 1882; this company's objective was the purchase of the Feniscowles Paper Mill Co.'s property and the continuation of the mill's operations. The deeds were signed in September 1882. The principal founders of the new company, The Sun, were James and Timothy Lightbown, to be mentioned later, Josiah Gregson, and John Jackson.⁴ The coming together of these persons in this connection led to a strange situation and incident in connection with Star, as will later become apparent.

In June 1874 the Withnell Paper Co. Ltd. was founded, also with the aim of producing paper. The company's capital was £20,000. The mill was built at Withnell and was ready for production the following year. From the very beginning the Lightbown family had an interest in the company; the most important shareholder was James Lightbown, manufacturer. Other shareholders, also, were the same people who will be met with a little later in connection with Star. The Withnell mill, too, proved to be a poor financial enterprise and soon after it was founded it ran into difficulties and in August 1877 it had to cease production. In addition there was a court case arising out of the company's muddled affairs. In the same year, 1877, the company's general meeting decided on the



The area of the River Roddlesworth, which rose in the marshes about 4 miles south of Feniscowles.

winding up of the company, and an estimate made at the beginning of the 1880s mentions that the shareholders lost half of their investments in the Withnell enterprise.⁵

In 1874 the number of paper mills in the Roddlesworth Valley increased yet again, when the Roddlesworth Paper Mill Company Ltd. was founded. According to its Articles of Association, drawn up on 12th March, 1874, the company was formed for "the acquisition of land on which to erect works for the manufacture, printing, and sale of paper, or the purchase of works and buildings already erected for the same purpose". The company's share capital was £30,000. The founders were Laurence Gregson, cotton manufacturer, Josiah Gregson, cotton manufacturer, Timothy Lightbown, cotton manufacturer, Henry Lightbown, paper stainer, James Lightbown, paper stainer, Roger Lightbown, cotton manufacturer, and James Longton, mill manager. These men subscribed half the share capital in the new company, which meant that, to a large extent, the company became a joint undertaking of two families. The company's registered office was in Over Darwen, the founders coming from the Darwen-Feniscowles area.⁶

There is no need to look hard for any special reason for the founding of the company, for in the 1870s there was a widespread development in the United Kingdom's paper industry.⁷ However, the founders tended to be textile manufactures, obviously one of the central motives was to make use of the textile industry's waste material. In the Roddlesworth Paper Mill Company's Articles of Association, the alternative objective of purchasing an existing paper mill was particularly mentioned. When this company was founded the previously mentioned Roddlesworth Valley paper mills were already in existence but there would still have been enough textile wastes for several more paper mills and it would have been worthwhile for cotton mill owners to found paper mills in order to use the waste rags.

When it became clear that no mill could be purchased, the Roddlesworth Paper Company Ltd. started building their own mill in the Roddlesworth Valley. The site chosen was at a spot where the river widened and where both the mill and its reservoir could be built at reasonable cost. The choice of this site was influenced by the fact that the Leeds—Liverpool Canal passed it at a height of 150 feet above the valley floor.

Before the Roddlesworth Paper Company saw its mill completed, a new company, called The Star Paper Mill Company Ltd., was founded in its stead. Its Articles of Association were signed on 18th March 1875, according to which the company was to buy from the Roddlesworth Company its unfinished mill, reservoirs, and other property, as well as the company's rights, easements and appurtenances thereto belonging. The founding members were: Josiah Gregson, cotton manufacturer (Over Darwen), John Jackson, chemist (Oldham), Timothy Lightbown, cotton manufacturer (Over Darwen), James Bottomley, cotton doubler (Oldham), James Howorth, cotton spinner (Oldham), Lawrence Gregson, mill manager (Lower Darwen) and John Kenworthy, accountant (Hollinwood near Manchester). The company's share capital was £60,000, consisting of 6,000 £10 shares. The company's capital was thus double that of the Roddlesworth Company.⁸

The motives for founding a new company are obvious: the aim was to obtain more capital and to finish the mill building, which had already been started. As the names of Star's founding members imply, they were more or less the same entrepreneurs as in the former company. The company was registered on 23rd March, 1875, the registered offices being in Feniscowles.

When the shares were first issued, 462 persons willing to invest their money in this company appeared. A large number of the purchasers of shares were directly involved in the textile industry, but many other occupations were represented, too: mechanics and engineers, tradesmen, book-keepers, grocers and chemists, and even sailors, servants, married women and spinsters, as well as a few whose occupation is given simply as 'Gentleman'. The largest shareholdings were the following: Josiah Gregson (950), Lawrence Gregson (950), Timothy Lightbown (750), Henry Lightbown (650), and James Lightbown (500). There were four further shareholdings in excess of 200 shares, but most shareholdings fell within the 5—50 range. Geographically, the ownership of shares centered on the Darwen, Blackburn, Feniscowles region and the area to the west, stretching as far as the coast, from Lytham to Blackpool. There were also a few shareholders from Rochdale and Manchester.⁹

The Lightbowns had a central position in the enterprise. The Lightbowns were a well known Darwen family whose local history can be traced back over several centuries. The three Lightbowns mentioned here (Timothy, James, and Henry) and Roger, who has already been mentioned, were all children of John Lightbown, manufacturer. All their business enterprises centered on the cotton industry and paper staining. They had two cotton

mills in the Darwen area, Dove and Heyfold Mills. In paper staining they had interests in Lightbown, Aspinall and Co. and Lightbown, Ellis and Co. Henry Lightbown was in charge of the general management of the concern, in addition to which he had his own textile enterprise, Henry Lightbown and Co. Timothy Lightbown was the manager of the Dove mill and Roger was the local manager of several firms and in addition he had a grocery business at Darwen. James Lightbown was also a local manager and the secretary of various firms within the family concern. The Lightbowns had an esteemed position in society, which was shown by the fact that Timothy Lightbown, for example, was Mayor of Darwen.¹⁰

The Gregsons were cotton manufacturers whose activities centered on the Carr mill in Over Darwen, which belonged to the J. L. and J. Gregson Company.¹¹

The new undertaking and its mill were given a name 'Star' connected with astronomy, which continued a local tradition; at the beginning of the 19th Century there had been a tavern in the valley called The Sun Tavern, around which revolved a great deal of gaiety in the life of the village. When this tavern was pulled down, its name was upheld by the formation of the Feniscowles Paper Mill, later to be called the Sun Paper Mill in 1882, and was again upheld by this Star Paper Mill, as it was also by the Moon Paper Mill, in existence further down the river, and by the Eclipse Mill in Feniscowles, a textile mill. This tradition of the company names can thus be traced back to the time when The Sun Tavern was in existence in the area and was such a focal point of village life.¹²

The first board of Star consisted of the above-named five founders; the first mill manager was James Longton and the first secretary was Ralph Crompton, but they both remained only a short time in the company's employ. Mr. Henry Rayner was appointed manager in December 1876; he held this post until his death in 1886, when he was succeeded for about two years by his son. The board had large responsibilities, but little power as such, as was usual in those days. Important decisions, such as the purchase of machinery and buildings, the arranging of loans and mortgages, and the renting of land, were only possible with the sanction of the general meetings, which were held four times a year, as company accounts were also audited quarterly, but it was possible to hold extraordinary general meetings in addition to this, as happened quite often, especially at the beginning of the company's existence.

In the spring of 1875 work was continued on the building of the mill. The previous leases were transferred into the name of the new company and in addition another lease from the Feilden family was taken out on the land in the autumn of 1875. It was a 999 year lease, the annual rent of which was £197. The essential, and perhaps the most conspicuous part of the building of the mill was the construction of a reservoir. Approximately 800 yards above the site of the mill, at the very spot where the River Roddlesworth passed under the Leeds—Liverpool Canal, a separate water channel was led to the reservoir, into which the main part of the waters of the River Roddlesworth was fed. When viewed from the site of the mill, the reservoir was to the right of the river, and the water level of the reservoir, when filled, was 10 feet above the level of the neighbouring river. The installation of the mill's first paper machine commenced in the autumn of 1875. The manufacturer of the Fourdriner-type machine was the firm of James Parke (of Bury). The machine width was 120 inches. In January 1876 it was possible to commence production on this machine.¹³ The second machine, another Fourdriner manufactured by James Parke, was able to start production in 1878. In 1881, the company made an important purchase from the point of view of its functioning when it bought the Withnell paper mill's buildings, machines, and water rights for £3,000.

From Star's point of view, the purchase of Withnell's property was valuable, because the mill could now build a second reservoir further up the River Roddlesworth, thereby ensuring water supplies for a bigger paper production. When Withnell's useable paper machine and other moveable assets had been transferred to the Star mill, the first building phase was over. Essential equipment consisted of three paper machines, two of which had a width of 120 inches and the third, 112 inches. For the production of pulp there were different boilers, 16 holander beaters and two refiners. In the finishing department there were eight reelers, cutters, and a guillotine. Power for the mill was supplied by eight Lancashire steam boilers and a few steam engines which together developed 1500 hp. About 300 persons were employed by the mill, the majority of them in the fibre sorting and processing department. Shortly after starting to function, the mill confined itself almost exclusively to the manufacture of newsprint, using as raw material waste rags, waste flax, and Bombay gunny bagging, a kind of native manufactured jute. There is no mention of the use of wood pulp; it is, however, highly likely that pulp was used to a certain extent, but they did not wish to advertise this as the public had a very suspicious attitude towards the use of pulp, it being regarded

as less than honourable — a kind of forgery of paper. There is hardly any information concerning the first customers of the mill, except that they were well-known throughout the United Kingdom and the Colonies.¹⁴

Soon after the founding of Star it became apparent that more funds than estimated were required and the share capital had to be re-organised. Firstly, this was because at the beginning shares could be paid for in instalments — as, indeed, they could be later — with a £1 deposit, the remainder being paid monthly, or at call when the board so stipulated. Secondly, when the time of payment came, a number of share subscribers had second thoughts, and in fact the number of shareholders decreased in the first five years; in 1878 there were 130 shareholders. As the actual share capital grew slowly and the company experienced liquidity problems, the share capital was increased in 1876 by £20,000 with the issue of 4,000 preference shares with a nominal value of £5. These shares had a guaranteed annual interest of 6 %.¹⁵ The next increase in capital took place a year later, with the issue of 1,500 £10 debentures, having an annual interest of 8 %.¹⁶ This money carried rather a high rate of interest and so the loan was converted in 1881 into a new debenture loan at 6 % interest.¹⁷ In 1878, when the previous share capital was almost entirely paid up, the company's share capital was further increased with the issue of 4,000 new £5 shares. This brought the company's nominal share capital up to £80,000, but the actual capitalisation was much smaller¹⁸ The principal features of the company's balance sheet in 1881 were as follows:¹⁹

Liabilities		Assets	
Share capital		Land, buildings, machinery	£75,650
Ordinary shares (paid)	£50,908	Inventory	£10,339
Preference shares (paid)	£ 3,550	Profit (three months)	£ 291
Debentures	£15,000		
Mortgage claims	£14,434		
Creditors	£2,388		
<hr/>		<hr/>	
Total	£86,280	Total	£86,280

In the early years of the company there were no profits for distribution — in fact, there were no profits at all — but in 1878 a 2.5 % dividend was paid on voting shares and this dividend was maintained until 1882.²⁰

2. The gentlemanly era. Star from the early 1880s to the 1920s

a. The management of the company

Until the late 1880s the control of Star remained in the hands of the founding families, in particular the Gregsons and the Lightbowns. At the beginning of the decade the Lightbowns strengthened their position when the Gregsons started to relinquish shares; it was further strengthened when James Lightbown, paper stainer, became a member of the board, joining Timothy Lightbown, who was Chairman of the Board. Of Star's original board members John Jackson still remained. The significance of these persons' presence at the head of the company was accentuated by virtue of the fact that since the beginning of the decade the board numbered five instead of seven. In the early 1880s the other two directors were Arthur Bentley, contractor, of Bury, and James Addison, retired publican, of Manchester.²¹

These changes in the constitution of the board were due in part to changes in the ownership of share capital, some families relinquishing shares and other families buying them up. As has already been mentioned, the Gregsons slowly started to sell their shares in the early 1880s, and in the mid-1880s the other founding family, the Lightbowns, also started to sell out gradually; in 1887 Timothy Lightbown retired both from the chairmanship and from the board.²² However, there were buyers for Star shares: in about 1880 a Bolton gentleman, John Charnock by name, began to express an interest in Star shares which he started to buy, so that by about 1885 he had almost 600 shares and in 1890 he held some 1200, making him the largest shareholder; other persons recorded by Star as shareholders were the above-mentioned Arthur Bentley and James Addison, as well as Richard Marsh, a grocer from Manchester, and William Knapman, a Salford machinist, each of whom had a shareholding of between 100 and 700 shares.²³

In 1888 there was a change in the board. Previously, the company had poor years from the point of view of results, so the General Meeting, which obviously had no more confidence in the original board, first increased the number of directors to seven and later released Jackson and Lightbown from their positions, without, however, filling the two posts which became vacant.²⁴ Another and more important reason for the changes was the fact that Star and the Sun Paper Mill lower down the river valley were competitors. As was previously mentioned, Sun was very largely in the

hands of the Lightbowns. In 1887, at an extraordinary general meeting, the management presented a plan for increasing production capacity. The possible alternatives put forward were the acquisition of the Sun Mill or the purchase of new machinery for the mill. The meeting established a special committee to examine the question and to open negotiations with the shareholders of the Sun Paper Mill.²⁵ However, the discussions with the aim of acquiring Sun were not fruitful and the deal fell through; obviously, conditions could not be agreed on. The breakdown of negotiations led to the Star board, where the power of control now rested with persons other than the Lightbowns and Jackson, finding James Lightbown's and John Jackson's interests 'antagonistic' to those of the company; the board, therefore, proposed that both gentlemen should be dismissed. The mill manager also, was replaced and at the same time Joseph Turner became mill manager. John Ely Jepson, who had been company secretary from the earliest years of the mill, being appointed in 1877, remained in his post.

Star's board functioned until 1920 with the nucleus of members which had formed in 1888 and with various offshoots of this nucleus. The board numbered five members, a number which was not increased, despite some suggestions to that effect.²⁶ The chairman in 1889 was Arthur Bentley and the members of the board were James Addison, John Charnock, Richard Marsh, and John Leach, cotton manufacturer from Rochdale. In 1894 Bentley resigned from the chairmanship on grounds of ill health and was replaced by Addison, and the later-mentioned William Knapman filled the resulting vacancy. In 1897 John Leach died and Thomas Settle was elected to the board. From 1897 until 1906 the board consisted of Marsh, Knapman, Settle, and Charnock, with Addison as chairman. In 1906 Marsh died, but no new member was elected in his place, the board functioning with four members until 1916. When Addison died in 1909 the chairmanship passed to Charnock and John Ely Jepson, company secretary for so many years, was elected to the board. In 1915 William Challinor, a stockbroker from Lytham, became a director on the death of Settle. In 1916 a fifth member was elected to the board, John S. Rixson, coal merchant, of Poulton-le-Fylde. From 1909 onwards the company secretary was Henry Malley.²⁷

Except during the very first years of the company, general meetings were held at half-yearly intervals, in May and in October. At these meetings, a balance sheet for the six months was presented and a dividend was declared. In 1898 the powers of the board were increased when the

company was given new Articles of Association. In 1897 it was discovered that for many years the directors had not complied with the Articles of Association when purchasing machines, buildings, etc., and so an extraordinary general meeting was called in 1897 in order to consider altering the Articles so as to empower the directors to make such purchases. The new Articles were approved at the meeting of shareholders in February 1898.²⁸

b. The mills' technical development

In the main, Star operated with the same machinery after the 1880s as it had at the beginning of the 1880s. Although there were no significant purchases of machinery after the early 1880s, this does not mean that the company stood still. From the point of view of the mill's operating prerequisite, i.e. the water supply, the construction of the Withnell reservoir on the old Withnell mill site near Abbey Village in the years 1885—1886 marks an important step forward,²⁹ and in 1886 the mill changed over to electrical lighting, which in turn demanded an increase in the mill's steam resources.³⁰

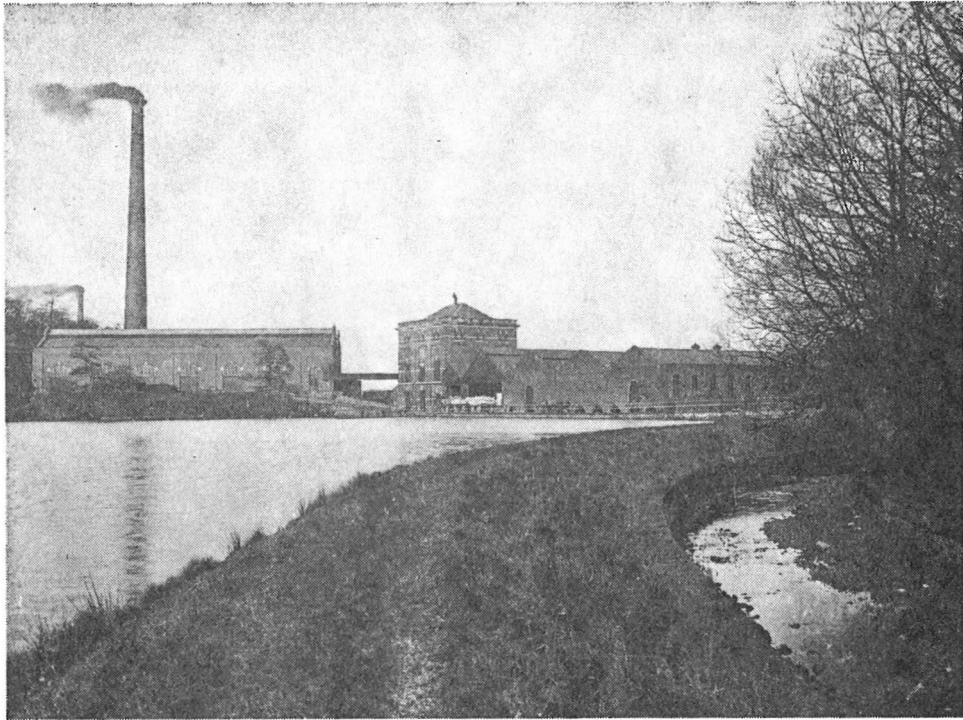
After their abortive attempt to acquire the Sun Paper Mill Co., the Star board started to increase production by purchasing new machinery. The general meeting in May 1887 instructed the management to take steps for the acquisition of a new paper machine for the mill. The new machine was a 108" fourdriner, built by Bentley and Jackson and after its introduction into service the mill's paper production capacity was almost 10,000 tons.³¹

Just when the mill's fourth paper machine was taken into use, the paper market suffered a slump and the company operated at a loss. The year 1888 was especially bad in this respect. As has already been mentioned, these difficulties led to changes in the technical management. The difficulties in the paper market continued until about 1890 when a turn for the better took place. At this point, Turner presented a plan for the purchase of a new paper machine for the mill, for which there was a special reason: the mill's paper machines were no longer suitable for the new width of newspaper presses, where technical advance had led to the use of 35" rolls; for the mill, this meant that 120" machines were

too narrow for the gauge of the new printing presses. Turner began negotiations with machine tool manufacturers concerning a 143" machine to be purchased by Star.

This was Turner's idea and it led to the world's first 143" machine, which was also the world's widest paper machine to date. The board approved the contract between Star and Bentley & Jackson in March 1891 and in April the following year the machine started production. The machine had three suction boxes, two sets of press rolls, twelve cast iron cylinders in the drying part and four auxiliary cylinders for drying the felts. At the end of the machine there was a four-roll calender and after leaving the calender, the web of paper was cut into as many widths as were necessary for the order, and rolled. The machine was 143" wide and it had an annual capacity of approximately 4,000 tons of newsprint.³² The machine, called the 'Greater Britain', attracted a lot of attention as it was the biggest paper machine in the world, and so made Star one of the best known English paper mills. When this machine was installed, one of the old machines was taken out of service and was sold to North Eastern Paper Mills.³³

In addition to bringing Star considerable prestige, the new paper machine considerably influenced the mill's financial results. The years following the introduction of the machine were unfavourable to paper producers, but thanks to its new machine Star was able to maintain profitable production. In the spring of 1896, however, the market situation improved and the mill received so many orders that it was difficult to satisfy demand. The management then embarked on another policy of expansion.³⁴ A new paper machine was again ordered from Bentley & Jackson; this time it was a question of a 100" machine specifically intended for the manufacture of wall-paper. Ordering the machine meant that Star was embarking on the large scale manufacture of a product other than newsprint. Technically, the machine was very different from the paper machine purchased four years earlier. For example, the drying part was much larger, and consisted of 24 drying cylinders and seven felt-drying cylinders.³⁵ Before the machine was commissioned, a fire ruined part of the mill, including the bleaching plant and the pulp-preparation plant. Although the fire retarded the work of expansion, it was to lead to more thorough repairs as the departments ruined by the fire needed to be re-established; at the same time, the opportunity was taken of installing more efficient machines.³⁶ After several delays, the new machine started production in the autumn of 1897.³⁷



View from reservoir bank taken about 1908. The reservoir (left) took so much water from the Roddlesworth that the river (right) was almost dry. In the background are the boiler and engine house and storage buildings.

The expansion of some departments soon caused bottlenecks in other departments. The problem of supplying power to the new paper machines was solved by providing every paper machine with its own adjacent steam engine, from which power was taken to the paper machine by mechanical drive. The power problem presented by the partly rebuilt beater house and the two old paper machines was solved in 1899 by buying a 350 hp steam engine.³⁸ After its introduction, however, there was a shortage of steam power and in 1903 the management took action for the long-term solution of the mill's power problem.³⁹ Under the direction of Thomas Settle and William Knapman, a new boiler room was built in 1904—1905, equipped with 12 Lancashire boilers working at a pressure of 135 lbs. The boilers and ancillary equipment were constructed by the Bolton firm of Hick, Hargreaves & Co.⁴⁰ The costs of the new power unit

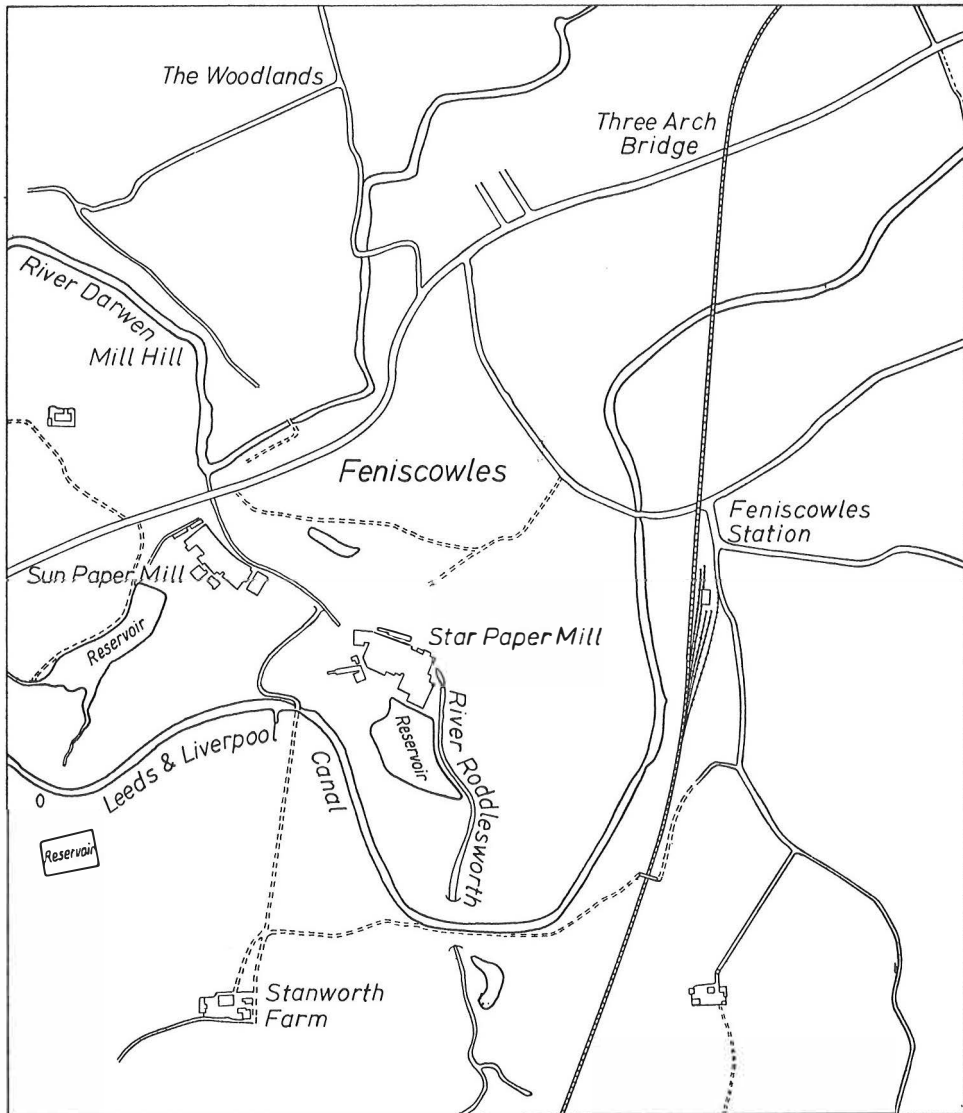
were high, approximately £21,000, but then the mill's management, proud of its plant, could ask visitors whether they had seen a more powerful boiler room anywhere else in the world.⁴¹

The mill's sixth paper machine was purchased in the years 1905—1906. This machine, built by Charles Walmsley, was a 123" wide newsprint machine with four suction boxes, two sets of press rolls and in the drying part altogether 32 cylinders. The machine was powered by two steam engines and had a working speed of 400—420 feet per minute; its capacity was almost 7,000 tons per year.⁴²

At the same time as these large and visible changes were being made, less visible, but nonetheless important, innovations continued to be carried out. When the number of paper machines was increased, the efficiency of the pulp production department had to be improved. And then, the paper finishing department was rebuilt in 1906—1908.⁴³ By about 1908 the whole mill was in such good condition that it was held to be a model mill of its kind and the most completely up-to-date one. The company's prestige was also evidenced by its attempts to become a part owner in pulp mills in Canada and Norway.⁴⁴

At the beginning of the 1890s Star's annual production was in the region of 13,000—14,000 tons per year. At the end of the century, the 15,000 ton mark was passed. At the end of 1905, production had risen to about 20,000 tons and when the newest paper machine started production in 1907, annual paper production was approximately 25,000—26,000 tons, where it remained for a long time.⁴⁵

At the beginning of the 1890s Star used as raw material rags, waste paper, chemical wood pulp and mechanical wood pulp. When compared with the raw material basis of the beginning of the 1880s, a simplification is apparent, as esparto and jute are no longer used as raw materials. Of the four principal materials mentioned above, rags were to disappear as a raw material, but chemical pulp and mechanical pulp were to increase in importance. Around 1895, about 70 tons of rags were still used every week, but three years later this amount had already dropped to 20—30 tons; in addition, certain paper qualities were more and more being manufactured without the use of rags as raw material. The use of chemical pulp increased correspondingly, from about 30 tons per week in 1895 to 100 tons per week at the turn of the century; the amount of mechanical pulp used increased from 100 tons per week in the mid—1890s to 220—250 tons per week in 1900.⁴⁶ Until the end of the century,



The Star Paper Mill and its surroundings about the year 1890.

most of the mechanical and chemical pulp used by the company came from Norway and Sweden, but there were occasional deliveries from North America and Central Europe. In about 1905, the mill also started using pulp manufactured in Finland.⁴⁷

Most of the company's production of paper was sold on the home market. At the turn of the century, Birmingham, Manchester, Liverpool, and Bolton were important towns from the point of view of the mill, as they took the bulk of the company's production. Star's newsprint had obtained markets all over the United Kingdom on account of its relatively high quality. Newsprint manufactured by Star was also exported to the Commonwealth, the main agent being the London firm of Ledger & Sons. From the point of view of sales, South Africa was the most important overseas area for Star.⁴⁸

When the new paper machine was completed in 1897, Star became an important producer of wall-paper. Before the World War, the most important customer was The Wall Paper Manufacture Co., which purchased the bulk of the production of Star's No. 2 machine.⁴⁹

3. The financial position

It is very difficult to evaluate the company's financial position during its early years because accounts and printed balance sheets have disappeared and the information that is available covers only a few years. Therefore, estimates have to be made, using incomplete information as well as details of secondary importance.

In 1887 the company's share capital was increased by £20,000 with the issue of 4,000 shares having a nominal value of £5; this was in connection with the acquisition of a paper machine.⁵⁰ Afterwards, the share capital was £100,000, but paid up capital was considerably less than this, as shares were only gradually paid up and not all shares subscribed for had been paid for. In 1890, however, all ordinary shares were fully paid up; the number of shares was 13,032, which meant that £65,160 was invested in the company.⁵¹ In 1891 the company took steps to have its shares quoted on the Manchester Stock Exchange. When the company had made certain changes in its Articles of Association, expressly annulling the privileged advance purchasing of shares, as demanded by the council of

the Stock Exchange, Star's request was granted in 1892 and it received a quotation on the Stock Exchange.⁵² The Stock Exchange quotation of the company's shares was a significant event for the shareholders, who could now realise their shares on the market at a profit; at the same time, it meant an increase in the company's prestige.

In addition to the part of the share capital represented by the ordinary shares, the company had £12,000 of preference capital, in the form of 4,000 £3 shares, the nominal value of which was, in reality, £5, but only £3 had been paid. The shares were guaranteed 6 % interest on specific terms, and payable on the sum of £3.

Shares purchased on an instalment plan were somewhat like the manner of financing which the company adopted in 1887 by offering shareholders an opportunity to invest their money in the company at an annual interest rate of 5 %.⁵³ In the following decade, this interest rate was reduced, first to 4 % and later to 3.5 %. The mill thus offered shareholders an opportunity to invest their money profitably. This was a more flexible way than the purchase of shares in that the company repaid on request money which they had borrowed, provided that the sums involved were not very large. The mill also acted as a kind of fund: it issued deposit books, and from books that have been preserved, it can be seen that lenders kept their capital in the company for a long time, but withdrew the annual interest.⁵⁴

Long-term capital was also tied to the company in the form of debentures. The 1881 issue of debentures was converted 10 years later into a new 4.5 % debenture loan.⁵⁵

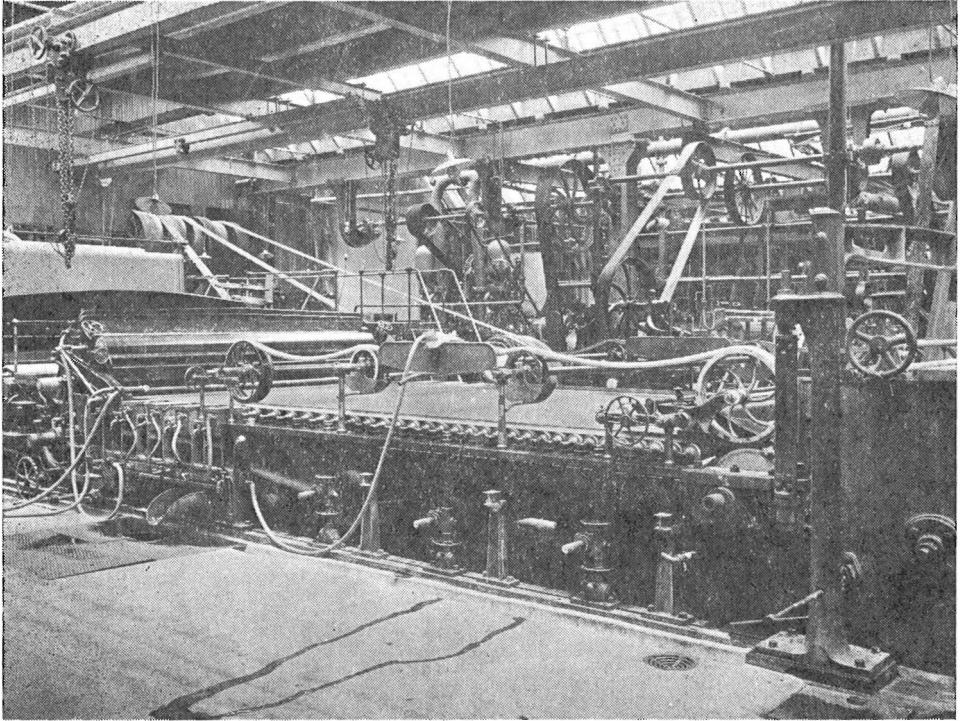
The improvements that were made at the mill in the 1890s and in the following decade were carried out without the need to raise new share capital. This was done mainly with the help of loans, although profits were also used in part. In 1893 the company transferred its custom to the Manchester and County Bank, which offered the company a cheque account with an overdraft limit of £6,000. Later in the same decade and in the following decade the bank granted long-term loans to the company and the charges on external capital were so reasonable that this was a more profitable way than raising share capital. In 1892 the company had at its disposal loans totalling £13,000, but in 1900 long-term credit was £33,000 and short-term credit, because of investments, was £42,000. In 1900, the company's balance sheet looked as follows:

Liabilities		Assets	
13,032 Ordinary shares	£ 65,160	Land, buildings,	
4,000 Preference shares	£ 12,000	machinery	£141,087
Amount paid in advance		Stock, material, paper	£ 24,771
of calls	£ 3,318	Accounts owing to	
Mortgage Debenture		Company	£ 55,719
Stock	£ 40,000	Cash	£ 61
Loans	£ 33,115		
Accounts owing by			
Company	£ 42,170		
Reserve Fund	£ 10,000		
Balance	£ 15,875		
<hr/>		<hr/>	
Total	£221,638	Total	£221,638

In that year, external capital invested in the company was 52 % of the final sum shown in the balance sheet. The company's liquidity was good, and in other ways, too, the company made a trustworthy impression. In the years 1900—1915 the company's profits were £10,000—£12,000.

In the years 1878—1886, dividends paid out by the company fluctuated erratically between 5 % and 10 %. In the following years, 1886—1890, the poor profits and genuine losses prevented any dividends from being paid, but in 1891, ordinary shareholders could again be paid a 6 % dividend. In the mid—1890s there was further fluctuation in the dividend rate, but at only one half-yearly meeting was the dividend passed. From the autumn of 1896 until the year 1912 Star regularly paid its ordinary shareholders a 10 % dividend and its preference shareholders the promised 6 % interest. Between 1912 and the start of the World War the dividend fluctuated between 10 % and 13 %, and during the war it rose as high as 35 %, because of the large profits made by the company (1918). From 1896 onwards Star's position was extremely stable and the paper trade's difficult years (for example, 1902) did not affect dividends. In the autumn of 1909 the 'Daily Despatch' was justified in writing "this is one of those industrial companies where shareholders can with confidence await returns".⁵⁶

During and after the World War, Star made profits ranging from £32,000 to £58,000. When he presented the statement of accounts in the autumn of 1918 the Chairman of the Board was able to state that year's balance sheet was "the best one ever during the history of the company placed



The wet end of Walmsley's 123" machine built in the years 1905—1906.

before the shareholders".⁵⁷ That year, the company's profits were £58,000. As a consequence of the profits and exploiting the company's reserves, the share capital was re-organised; using the Company's own funds, the nominal capital was increased from £100,000 to £160,000 by the creation of 12,000 ordinary shares of £5 each, and bonus shares were issued on the 13,023 ordinary shares held prior to the increase on the basis of one for one.⁵⁸

Because of the good financial position of the company, the board also decided in the autumn of 1918 to redeem debentures three years before their expiry, the redemption taking place that same autumn.⁵⁹

When Star's ordinary shares were first listed on the Manchester Stock Exchange, the price quoted was between £6 and £7. In the mid—1890s,

when trade was depressed, the quotation went down about £1, but rose rather sharply in 1898—1899. In the year 1899 the quotation reached £8 for the first time and between 1900 and 1910 it remained fairly steady, fluctuating only a little between the limits of £7 and £8. In 1911 the price of the shares rose to £9 and on the eve of the World War it was about £10, in other words 100 % above par. The value of the shares reached its peak at the end of the World War, when it was about £11.⁶⁰ The stock market quotation also shows how highly regarded the company was. Star's best years before the World War were 1900—1912. The mill's modernisation programme, which had been decided on at the end of the 1890s, succeeded well in all respects. The result was that the mill's competitive position, both as regards the quality of the paper it produced and its price, was good. A visitor to the mill at the beginning of the century who asked the directors of Star "How is the business going?" would have got the answer "Not bad" and he would have heard the directors as well as the members of their families describing, over a cup of tea in the evening, the adventures they had on trips around the world and giving their comments.

In the 1920 paper market boom, Star aroused so much interest that the board received two suggestions for putting the company on a new basis. These suggestions were probably based in part on the fact that there had already twice been plans for the liquidation of Star, which had come to nothing. This time, two consortia were interested in Star, in each case the basis for the proposal being the purchase of the shares and the formation of a new company.⁶¹ Before the beginning of actual negotiations, the Star board already "agreed to accept an offer for the mill of not less than £20 per share".⁶² Of the two offers, the board preferred that made by the consortium headed by Alexander Young, mill owner, for the purchase of the mill. Young offered £21 each for ordinary shares and £3 each for preference shares. It was also stipulated that in the formation of a new company the present shareholders had the right to exchange old shares for new ones on the same conditions that governed the transference of the mill to the new company.⁶³ In May 1920 the general meeting finally approved the sale of the mill to the new company.⁶⁴

In a way, the voluntary liquidation of the company seems strange when viewed against the background of the company's healthy position. On the other hand, this measure taken by the board gave shareholders the opportunity either to withdraw their investment in the company or to

remain in the company under the terms agreed, in which case the change mainly meant that the company's share capital was re-organised. Behind this change, though, one possible line of reasoning may be discerned: the company was not necessarily intended to last for ever, but it was a commercial enterprise, which, for reasons of practicality, could be dissolved and reorganised.

II Star in the Inter-War period and in the 1940s

1. The Star Paper Mill Company Ltd.

The founder of the new company was Alexander Young, the owner of a Wigan cotton mill. Other prominent persons in the company were William Robert Challinor, stockbroker, of Pleasington, John Samuel Rixson, coalmerchant, of Poulton-le-Fylde, Albert Edward Baucher, solicitor, of Wigan, John Ely Jepson, paper manufacturer, of Pleasington, and John Elliot Jepson, paper mill manager, of Feniscowles. Between them, these six men held £18,000 of the share capital of £50,000. Some of these families increased their shareholdings all through the 1920s, so that, at the end of the 1920s, the families with the largest shareholdings were the Challinors (approximately 30,000 shares), the Charnocks (25,000 shares), and the Jepsens (23,000 shares). There were, in addition, a few families with holdings of about 20,000 shares. These and other details from the register of shareholders show that Star remained, to a large extent, in the same hands as it had done up until then. Most of the shareholders were resident in western Lancashire.¹

The board of the re-organised company consisted in the main of persons with the largest shareholdings; the Chairman of the Board was John Ely Jepson and the Vice-Chairman was William R. Challinor. The managing director was John Elliot Jepson and the secretary was Henry Malley.² Although the company was reconstituted, the previous mill executives remained in their posts. John Ely Jepson remained as Chairman of the Board until his death in February 1925. He was succeeded by William R. Challinor in the years 1925—1928, who was in turn succeeded in 1929 by Arthur Holt Charnock, the son of the former director, John Charnock. John Elliot Jepson held the post of managing director until 1928, when he was replaced by Thomas Holt, formerly managing director at the Bury Paper Mill.³

The first years of the new company were financially successful. In 1920 the dividend was 10.5 % and in the following year it was 9 %. The main reason for these good financial results was the prevailing paper shortage; after the end of the war, paper stocks had been run down, but meanwhile there was no end to the wartime rationing or to inflation. The war had been financed mainly by printing money and, with the return of peacetime conditions, governments found it impossible to balance their budgets except by letting inflation continue. At the beginning of 1920, the products of the wood-processing industry were in great demand; on the international market, there was a shortage of several paper qualities and from the point of view of the efficient mills it was possible to talk about a boom. In addition to the above-mentioned factors, the shortage of supplies was due to the depressed state of the central European paper industry in the post-war situation. The paper shortage was world-wide, and even in North America newspapers had to limit their number of pages and curtail their publishing activities.⁴ In those years, Star had no sales problems; all the mill's machines worked at full pressure and in each of these two years paper production was 24,000 tons.⁵

In 1921 there was a change in the paper market. The paper industry, like all other branches of industry, was placed in difficulties, with governments starting to follow a monetary policy which had the aim of preparing for a return to the gold standard. In April 1920, the Government of the United Kingdom announced a drastically decreased Budget and at the same time Bank Rate was increased. This led to a sharp downturn in the United Kingdom economy. Unemployment rose from 2 % to nearly 20 % and the index of industrial production sank from 118 to 90 points in the course of one year.⁶ Towards the end of the summer of 1920 the English paper market entered a period of stagnation, with sharply decreasing demand.⁷ The brisk activity which had preceded the summer holidays did not return after them to the East End streets where the paper merchants had their warehouses.

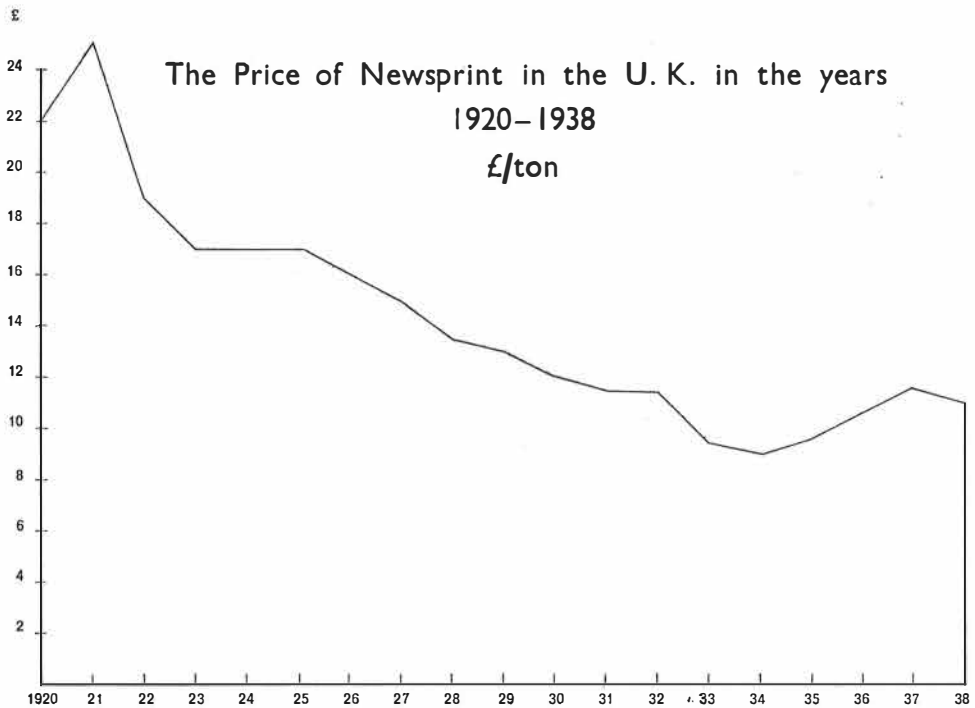
There is also a brief mention about increasing trading difficulties in the annual report of the Star board. Customers started to cancel orders in the spring of 1921, and the 1922 annual report states that "the management of the company's business during the period under review has been very difficult, owing to the abnormal conditions prevailing".⁸ The difficulties in the paper market continued until the latter part of 1924, when the situation started to look a little brighter. In the years 1922—1924, however, Star's financial results were not too bad, as the following figures show:

Year	Profit	Dividend paid per share
1922	£27,219	1 shilling
1923	£21,043	1 shilling
1924	£19,251	1 shilling

During each of these years, depreciation was at the rate of £20,000. For the shareholders, a dividend of 1 shilling was equal to gross profit of 5 %. The worrying factor was the reduction in company profits during the five-year period. Another loss, particularly from the point of view of the shareholders, was the fall in the value of the company's shares. In 1920 the price quoted on the stock exchange for 20-shilling shares was 22—26 shillings, but towards the end of 1921, when the paper market weakened, the price fell below par to 17—18 shillings.⁹

Decreasing profitability and a desire to remain a leading company made the Star management pay attention to preserving the mill's competitive position and so, in the mid—1920s, they began planning new investments. Previously, the mill had functioned with paper machines most of which dated back to the 1880s and 1890s; the most modern machine had been installed in 1906. After the World War some improvements were made on the mill site; these concerned buildings and moving equipment, but not the production process, which, as a result, started to become rather dated. The annual production capacity of Star's largest newsprint machines was then 4,000—5,000 tons, but at the same time in the U.S.A. paper machines with an annual capacity of 30,000 tons were being built; even in Europe, mills were changing over to 20,000-ton machines.¹⁰ Furthermore, a drop in the price of paper adversely affected the competitiveness of the old machines; in 1920 the market price of newsprint in the United Kingdom was £22 per ton, but in 1923 and 1924 the corresponding price was about £17.¹¹

In 1924 the management of Star decided on a relatively large investment programme. Its central part was the acquisition of a new paper machine which was taken into use at the end of 1925. This was a newsprint machine with a gauge of 180" and an annual capacity of 15,000 tons. It was a very modern machine, built by Walmsley, and was electrically driven. A 600 h.p. steam engine was bought in order to drive the generator which was required for providing the electrical current needed by the machine. The acquisitions also included a new super-calender. When the new machine was installed, the mill scrapped two old paper machines, including the aforementioned 'Greater Britain', built in 1892.¹² The new paper machine with all its ancillary equipment and the necessary



rebuilding cost about £170,000. Soon after the installation of the machine, the new management complained about the unnecessarily high price of the machine and especially about the fact that the machine could not be made to work satisfactorily, causing trouble for many years.¹³ In any case, after the installation of the new Walmsley machine, the mill's annual production capacity was 35,000 tons of paper from five machines.

Unfortunately, the company's new machine was taken into use just when the price of paper on the United Kingdom market commenced a clear downward trend after about a year and a half of stability. However, external difficulties were not limited to price changes, for the modernised mill started operating just when serious strikes threatened the country's economic life. In the spring of 1926 a miners' strike broke out, which quickly escalated into a general strike lasting nine days. The miners' strike did not end until November the same year, having meanwhile a paralysing effect on industrial activity, including the paper industry. Many

mills had to cease production completely and before they could recommence production and before normality returned to the market, the whole world was on the brink of economic crisis. In addition to these general difficulties, the company suffered misfortune in the form of new strikes in 1929 and plant breakdowns, caused by fires. In January, April, and again in June, 1929 the mill had largely been rendered in-operative and although the immediate damage caused by the fires was covered by insurance, the loss of production was a serious matter for the mill. Repeated fires and machinery breakdowns indicated that the plant was aged.¹⁴

The following balance sheets of the Star Paper Mill Co. Ltd. for the years 1920—1929 present a picture of the company's altered situation.

Balance Sheets 1920—1929
in £

Assets	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
Land, buildings, water rights, reservoirs, machinery	476 871	479 894	470 327	460 697	473 712	539 004	598 913	605 453	605 435	598 772
Stock in trade	216 994	84 569	92 943	106 406	106 322	77 025	98 796	167 131	85 823	47 065
Accounts owing to company	160 671	126 180	80 390	77 588	96 999	79 355	44 388	64 292	65 529	65 571
Cash	80	8 201	20 020	6 250	26 719	16 895	99	57	27	58
Assets total	854 616	698 844	663 680	650 941	703 752	712 279	742 196	836 933	756 814	711 466
Liabilities										
Issued capital - ordinary										
£1 shares	500 000	500 000	500 000	500 000	500 000	500 000	500 000	500 000	500 000	500 000
General reserve	—	20 000	20 000	20 000	20 000	20 000	20 000	20 000	—	—
Creditors	270 990	156 525	116 017	100 985	153 919	161 303	193 873	306 915	256 625	207 110
Balance	83 626	22 320	27 663	29 957	29 833	30 976	28 323	10 018	189	4 356
Liabilities total	854 616	698 845	663 680	650 942	703 752	712 279	742 196	836 933	756 814	711 466
Trading profit for year	not shown	not shown	27 219	21 043	19 251	20 571	17 346	1 695	—29 828	4 167
Dividend per share	1/9	1/6	1/—	1/—	1/—	1/—	1/—	0/4	nil	nil

The balance sheets show that in the latter half of the 1920s investments were made with the aid of external capital; the company's share capital did not increase, but its bank loans did. The company's external capital increased from £161,303 in 1925 to £306,915 in 1927. The increase in this external capital would have necessitated the full use of productive capacity, in other words, capital. As both external and internal reasons prevented this, the company's liquidity was becoming progressively weaker; one way in which this became obvious was the fall in the company's cash assets, which decreased threateningly close to the operating limit. At the beginning of 1928, the company negotiated with the Manchester and County Bank with a view to increasing its overdraft facilities from £100,000 to £200,000. The breakdown of these negotiations led to Star turning to the Midland Bank, which very reluctantly offered the company overdraft facilities of £130,000. Star's management accepted the offer, and so the company changed its bank.¹⁵

The balance sheets also show that new investments did not bring about the hoped-for results. Towards the end of the 1926 accounting year Star made a loss for the first time in the 1920s.¹⁶ However, this loss was rather small, under £2,000 in fact, and furthermore, it could be explained as a consequence of the strikes. In 1927 the company suffered a net loss although the balance sheet reports a small trading profit because of decreasing depreciation; however, no dividend for the last part of the year could be paid with these results.

If the latter part of 1927 was bad for Star, the situation the following year took an even worse turn; the company accounts showed a loss of almost £30,000, in spite of the fact that depreciation was almost minimal. In their explanation, the board put the main blame for the losses on changes in stock value. The company had bought pulp at too high a price and, when the price of paper declined during the year, the use of this pulp caused excessively high production costs.¹⁷ In the published annual report there was, however, no mention of the fact that for the first time the mill faced serious sales problems that year. In the opinion of buyers, the quality of paper was not as high as that of some competitors, and consequently, some customers were lost.¹⁸ According to certain evaluations made later, the company's difficulties were found to be organisational as well. Following the resignation of Mr. Jepson, the director, there was too great a burden of work for the new manager, Mr. Holt. No special mill manager was appointed and consequently Holt had to supervise the purchase of raw material, production, and sales as well as the routine

office work. It would also seem that Holt received very little support from the other, rather elderly, directors in managing the company. With one director overburdened with work, supervision deteriorated.¹⁹

1929 was clearly a more advantageous year than the previous one from the company's point of view. The company's account showed a profit of £4,000. Balance sheets show that the company's debts also decreased in 1928—1929, but this was only because the stock in trade was decreased. From 1927 to 1929 the value of stock in trade went down by about £120,000 at the same time as the company's debts decreased by about £100,000. In 1929 the company could not pay a dividend. Shareholders' losses were compounded by the decline in the value of the company's shares. At the beginning of 1928 the current price of shares was about 14 shillings, but after the publication of accounts the price dropped to about 5—6 shillings; in other words, the value of the shares was about 75 % below par.

From 1927 onwards, Star obviously began to be short of cash. When news about the company's difficulties started seeping through to the paper industry, some other firms started negotiations with Star to bring its independent functioning to an end and to merge it with a larger company. The Bowater Group twice made an offer, but the negotiations did not lead to any result.²⁰

In order to obtain new capital, the company's management proposed to the shareholders in 1929 an issue of 7 % preference shares. The subscription of shares was to be at the shares' nominal value, 20 shillings. The idea of acquiring capital in this way was more the Midland Bank's than the company's own, and did not lead to any practical results. The shareholders were not willing to subscribe new capital, and so the matter came to nothing for the time being.²¹ The subscription of new shares would have been so obviously poor an investment from the shareholders' point of view that the reception given to the offer was no surprise.

In the summer of 1930, when the price of paper was going down, Star faced increased difficulties. Its most important product, newsprint, cost 4 shillings per ton more to produce than the current market price.²² As there was a loss of confidence, the mill's creditors also became worried.

At the beginning of July 1930 the Midland Bank asked an independent firm of consultants to investigate the Star company because of its unsatisfactory state of affairs. This investigation, which certainly seems to have been rather superficial, showed that the firm's difficulties were in marketing rather than on the technical side.²³

At a Board Meeting that same month a representative of the Midland Bank announced that the company's credit cheque account stood at £138,000, with an overdraft £8,000 in excess of the limit agreed in the contract made with the bank and that, therefore, the bank was not going to accept any further cheques. The management's announcement that receipts at the beginning of August would reduce the debt to £130,000 could not make the Midland Bank change their mind.²⁴ On the contrary, the bank announced on 30th July that the account had to be below £130,000 within a week and that it had to be further reduced to £110,000 within three months. Star's management found it impossible to comply with these demands and requested negotiations with the management of the Midland Bank.²⁵

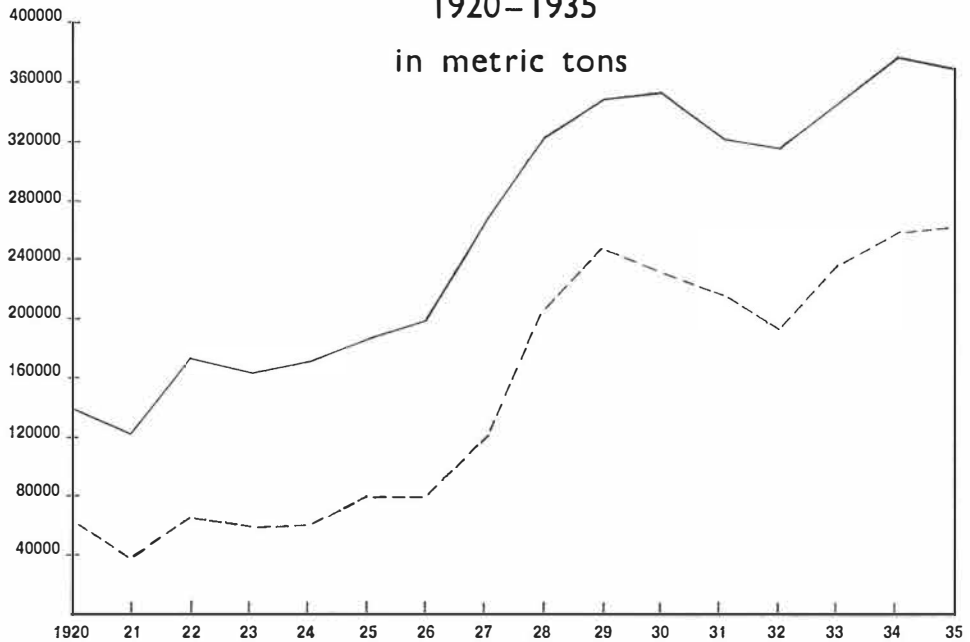
The Midland Bank's attitude was an expression of the fear of risk-taking which characterised the money markets at the beginning of the Depression. The Midland Bank's demands can also be seen as typical of the kind of action taken by banks at the beginning of the Depression and which only served to make the economic situation worse. However, it is possible that the Midland Bank knew what was to come and, having lost confidence in Star, wanted to steer matters in the desired direction with its stricter demands.

Within a 10-year period there was a complete change in the outlook and rationale of a once successful business. Difficulties were heaped in the way of the 50-year old firm soon after it had been reorganised in a spirit of great optimism. The company's difficulties were due in part to external factors, such as strikes and difficult natural conditions. More important, however, was the fact that in the mid-1920s the mill had to compete on the home market with foreign-produced newsprint. Nothing like this had ever happened before on such a large scale. It was primarily a question of Canadian paper, which was initially imported by the United Kingdom in great quantities in 1923—1924. The North American paper industry had experienced tremendous growth and the creation of surplus capacity there, together with cheaper freight charges, brought about the invasion of the British Isles by foreign paper. Star did, indeed, try to improve its competitive position by renewing its plant, by rationalising its production, in other words; but the management were no longer capable of dealing with the situation. One minor point was that there were serious disagreements between the board and the managing director, Jepson, which, being so long-drawn-out, occupied a lot of the company's directors' time. Cost control existed, but its results were only partially

Exports of Newsprint to the U.K. in the years

1920–1935

in metric tons



The Export of Newsprint to the U. K. in the years 1920—1935. ——— total exports,
- - - - - exports from the British Countries.

used for the company's benefit. As a lot of information which is closely concerned with the management is unavailable, the management may be suspected of not being fully acquainted with the state of affairs. While the production of the paper machines increased, there was no change in the marketing of the paper, nor does the observation which appears a couple of times in the annual reports about the company having to use more expensive pulp than many of its competitors create a good impression. The company's development in just one sector — the technical one — was unbalanced, and this led to the poor return on capital.

2. Kymmene obtains control of Star

a. The European paper market during the 1920s and 1930s from Kymmene's point of view

After World War I the Finnish paper industry established a secure position in the West European market by means of determined efforts. In the mid-1920s Finnish paper exports totalled approximately 200,000 tons, most of which went to Western Europe. The largest customer was the United Kingdom, taking 60,000—70,000 tons per annum, the bulk of which — some 40,000—60,000 tons — was newsprint.²⁶

During the 1920s, however, the trend towards a policy of protectionism was extremely worrying from the point of view of the Finnish paper industry, for it threatened to nullify the export achievements that had already been made. After 1921—1923, the poor years of the 1920s, many countries established increasingly strict tariffs on paper imports. Even in 1921 articles were published in the United Kingdom putting forward the case for protective tariffs for the United Kingdom's paper industry.²⁷ In 1923 the Paper-Makers' Association of Great Britain demanded protective tariffs for certain qualities of paper in order to prevent foreign dumping. It was openly stated that Finnish and German sales of packing paper in particular were creating difficulties for British paper mills. However, it took a few years before effective action was taken. The exporters' counter-offensive delayed, but could not prevent, the introduction of the new customs regulations. In 1926 a customs tariff of $16\frac{2}{3}\%$ came into force on packing paper and it was planned to remain in force for 5 years.²⁸

The Finnish company, Kymmene, which was the largest producer of paper in the Nordic countries, was also worried about paper tariffs. Between 1926 and 1928 the company sold on the United Kingdom market an average of 35,000 tons per year, most of this consisting of newsprint; the United Kingdom was the company's largest customer by tonnage and by value. Newsprint had hitherto been exempt from tariffs in the United Kingdom, but now there was not only a trend towards protectionism but also an increase in the production of United Kingdom newsprint to such an extent that the country's import requirements at least were going to decrease. In 1928 the production of newsprint in the United Kingdom was approximately 650,000 tons, but new paper machines were being installed which, it was predicted, would enable production to rise to 750,000 tons in 1930. At the same time it was estimated that the United Kingdom

consumption of newsprint was 900,000 tons, which included exports to other countries of approximately 25,000 tons. In 1930 the United Kingdom import requirements of newsprint would thus be 150,000 tons, whereas in 1928 they were 300,000 tons.³⁰ It was quite obvious that the increase in United Kingdom production would affect the marketing conditions for newsprint over the whole of Europe, as continental producers were in the habit of shipping part of their production to the United Kingdom and the changed conditions could have led to price competition based on dumping on the United Kingdom market; the government at Westminster would then have had to submit to the demands for protective tariffs from the domestic paper industry.

In the late 1920s, because the paper markets were threatened with oversupply, the producers started to look for possibilities of limiting production through mutual agreements. In 1927 the Canadian newsprint manufacturers tried to initiate a price cartel to bring the situation back to the previous recommended price basis. In the same year Verband Deutscher Druckpapier Fabriken suggested co-operation between German and Scandinavian newsprint manufacturers. As North American colleagues were also keen on co-operation a meeting was arranged in the spring of 1928 in Copenhagen where newsprint manufacturers from several important producer countries were represented. The meeting decided to set up a co-operation committee, called The International Committee on Newsprint, which soon established itself under the name of TICON. The following year (1929) TICON took measures to establish an international agreement on reducing newsprint production and on the establishment of marketing areas. This matter was dealt with at the organisation's meetings at The Hague, Montreal, and Stockholm. Agreement was nearly reached at the Stockholm meeting, which took place in July 1930. British manufacturers were at this stage willing to abandon the tariff on newsprint, which had been suggested to the government, and their plans to build up new production capacity in the British Isles in the coming years on condition that the volume of foreign newsprint on the United Kingdom market be restricted to 150,000 tons per year through the efforts of TICON. This would have meant a restricted market; however, no agreement on this was reached at Stockholm, because the Finnish Kymmene Company refused to come to any kind of agreement. This single stand was so important that no agreement on newsprint could be reached and during the next few years TICON was merely a body which produced statistics on newsprint production.³¹

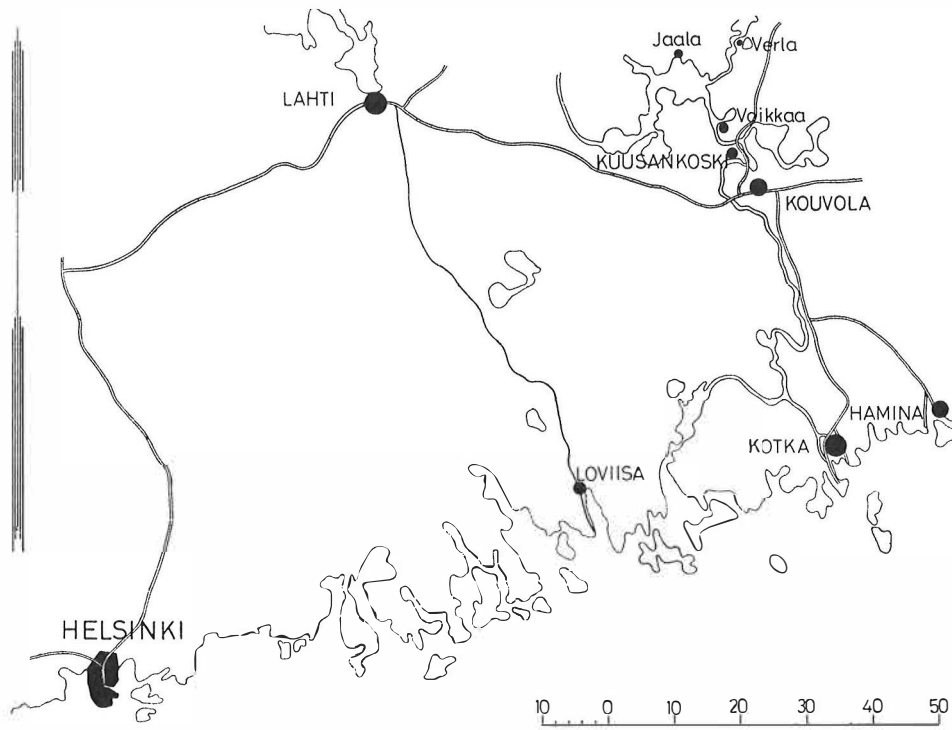
Kymmene's attitude towards market sharing was the stiffest and it can with reason be regarded as a sign of self-confidence and of a firm belief in the ability to survive any type of competitive situation. The company's view was all the more remarkable in view of the fact that within the Finnish quota of 60,000 tons Kymmene would have obtained such a large share that its export of paper to the United Kingdom would not have gone down, although it would not have been able to increase its export tonnage for a few years. Several factors influenced the company's decision to follow this policy.

The Finnish paper manufacturers' reluctance to agree to international limiting contracts was partly due to the disagreements between the German and the Finnish entrepreneurs at the end of the 1920s. The Finns were annoyed at the policy adopted by the German paper industry: the German paper markets were protected by high tariffs against foreign producers at the same time as Germany increased its sales of paper abroad and its imports of pulp wood from Finland.

Kymmene's attitude towards market sharing was influenced not only by the country's trade policy towards Germany but also by other factors. Agents in both the United Kingdom and in the U.S.A. objected strongly to the idea of market sharing, holding it to represent a worsening of relations between sellers and customers. Possibly there was a touch of free trade thinking behind the company's position. In the Kymmene board's minutes for 1932 there is a reference to agreements on trade limitation being nothing but harmful with regard to both international and Finnish foreign trade.

Behind the policy adopted by Kymmene can be seen the viewpoint of Einar Ahlman, the Managing Director, whose interpretation of TICON's functions may be clearly seen in a letter written to the organisation's Secretary General, Dr. Fredrik Jahn. According to Ahlman there was no need to push the matter any further, for the net result of any plan to divide up markets and customers or to secure limitation of production would be that customers would become angry and suspicious, while at the same time there would be a risk that purchasers of paper would find reasons for beginning to develop their own industry, for which they might possibly start using the paper producing countries' sources of raw material or semi-processed material.

In determining 'the company's advantage' another decisive factor was the very real situation which resulted from the following: the expansion of the Kuusankoski mills had stopped midway, the production of the chemical pulp mill had increased and new pulp mills were being built,



Map showing the region of Finland where most of Kymmene's plants were located. The company's head office was at Kuusankoski, where there were also — as at Voikkaa — pulp and paper mills. At Verla there was a mill producing mechanical pulp and board and near Kotka there were mills factoring chemical sulphate pulp, and sawmills. In some other parts of Finland, too, the company had pulp and paper mills. In the 1930s Kymmene was the largest paper producer in the Nordic countries with an annual production of about 300,000 tons. In addition the company had sawmills, iron foundries, and chemical factories. The company's shareholding was widely spread and no one family exercised control over the organisation.

and as it was the intention to increase paper production there was a corresponding increase in the amounts to be marketed.³⁰²

From 1918 onwards the Managing Director of Kymmene was Mr. Einar Ahlman, a lawyer and a man with considerable industrial experience. By 1928 he had managed the company with conspicuous success for 10 years when, in the changed market conditions then prevailing, he was obliged to take decisions that demanded considerable tactical finesse and were by no means of a routine kind.

In the spring of 1929, at a meeting of the board, he voiced his concern at the protectionist trend of thought being expressed in England, stating that the sale of the company's products might gradually meet with difficulties. In May 1930 Ahlman visited London, when he was involved in serious discussions about the tariff question and other matters.³² He talked in particular with the company's British agents and the director, Henry Reeve Angel, of Kymmene's leading agent, H. Reeve Angel & Co. Ltd. From their correspondence it becomes apparent that Reeve Angel was quite convinced that the United Kingdom would establish a general paper tariff. Furthermore, the British paper industry's trade journals were demanding tariffs to protect the domestic industry. Relying to a certain extent on H. Reeve Angel's expert knowledge, for he could be assumed to have access to reliable sources, Ahlman, too, came to take the idea of a general paper tariff in Britain seriously, at least to the extent that he began contemplating Reeve Angel's idea of Kymmene buying a paper mill in the United Kingdom. In a letter written by Ahlman to Reeve Angel in 1932 there is mention of Ahlman's sceptical attitude towards the establishment of production facilities in England.³³ The impression is given that Ahlman agreed with some reluctance that his agent should start to look for suitable mill premises. In this respect, the agent proved very active indeed.

Kymmene's British agent since 1908, H. Reeve Angel & Co. Ltd., was extremely concerned about the projected paper tariff, and with good reason, because the newsprint tariffs would have had an extremely adverse effect on the agent's activities. Accordingly, it had been agreed in discussions between Ahlman and H. Reeve Angel that the British agent would become shareowner, through some kind of capital investment, in any mill enterprise to be bought in Britain and that Reeve Angel would hold the franchise for the products of any such enterprise.

In July 1930, Reeve Angel's company was attempting to find the best possible solution and was making detailed calculations which were first and foremost concerned with marketing questions. The main consideration in these calculations was, apart from the tariff question, the dependence of the newspapers on the paper mills. H. Reeve Angel's calculations, and also those of Nicolai Herrmann, Kymmene's Sales Director, showed that the bulk of the United Kingdom newsprint production was in the hands of the large newspaper publishers, in particular Rothermere, Beaverbrook, and Allied Newspapers. It was estimated that only about 100,000 tons annually was produced by newsprint manufactures independent of the publishers, and these mills were generally small enterprises, who lacked

the economic advantages of the large paper mills and who, furthermore, were often in difficulties, being unable to manufacture paper of as high a quality as mills backed by publishers' capital. On the other hand, the annual paper requirements of those newspapers that were independent of the trusts were estimated at 370,000 tons; the chances of obtaining orders were rated as high, since the independent press had every reason to encourage paper mills outside the trusts ever since the paper tariffs came into force, provided that their newsprint was competitive quality-wise.³⁴

H. Reeve Angel had already been acting on these premisses long before the matter was officially taken up by the Kymmene board. In Reeve Angel's opinion, it was a wiser sales policy for the company to obtain interests in an existing British paper mill rather than build a new mill of their own. As a result of the British paper industry's unfavourable position in the late 1920s, there was a considerable number of mills in the country waiting to be taken over. It was in this connection that the Star Paper Mill Co. Ltd. and the Yorkshire Paper Mill Co. Ltd. were mentioned. Of the so-called independent mills, Star had the biggest capacity.

b. Kymmene obtains the majority of Star shares

In the summer of 1930, when the directors of Star were preoccupied with the deteriorating market situation and the insistence of the Midland Bank for repayment of short-term credit, events took a surprising turn. On 7th August the following entry was made in the minutes of Star's board of directors: On 1st August the company received notification that a certain distinguished client of the Midland Bank knew of a North European manufacturer of paper who was desirous of becoming a shareholder in a British paper mill and willing to contribute technical and financial aid. The Star Paper Mill being mentioned in this connection, the board were asked whether they were willing to negotiate, but they had virtually no choice, and so, already the following day, discussions on the matter were held in London. At these discussions the directors of Star were informed that the client in question was H. Reeve Angel and the company was Kymmene. Reeve Angel made an offer, which simply stated that the capital stock of Star should be reduced by 75 % and that Kymmene should be allocated sufficient new shares for them to obtain control of the

company, with the right to appoint the majority of the board members. The representatives of Star were agreeable to these arrangements, their main worry being how to obtain the shareholders' agreement to the takeover. They also agreed to the proposal that the Kymmene engineers should come to inspect the mill.³⁵

The following day, a meeting of the board of directors held at Blackburn approved the Kymmene proposal for an inspection of the mill, and it also expressed the opinion that the machines and plant were in good condition. The board also sent a letter to the Midland Bank in which they attempted to prove that their financial position was better than the bank estimated it to be, but at the same time they also expressed interest in the Kymmene offer and stated that they knew the company to be 'sound'. Star at least knew Kymmene very well because they had purchased pulp from Kymmene through the firm of Price & Pierce; Star, too was known at Kuusankoski, and not only as a purchaser, for there was other information concerning the mill. In 1927 Axel Backman, manager of the company's purchasing department, had visited the mill, where, according to his account, he had been well received.³⁶ The new turn of events was pleasing to the Midland Bank, who informed Star that they were not insisting on the curtailment of credit, so as to give the company a chance to complete the negotiations successfully, as the somewhat oracular turn of phrase put it.³⁷

Ahlman and Reeve Angel made very detailed preparations for the purchase of mills in England before the matter was taken up by the board of Kymmene. Ahlman's actions were perhaps indirectly influenced by the fact that as manager of the company he enjoyed considerable prestige. The measures taken for which he was ultimately responsible had been justified by events, and in conditions of tougher international competition they appeared in fact to be necessary; in the years 1928—29, which were difficult ones for paper manufacturers, the company's results were good. The auditors' report for 1929 states that "the affairs of the company have been managed with laudable care and great success". At a general meeting in April 1929, Ahlman was elected Chairman of the Board for the period 1929—33.³⁸ Investing one person with such extensive powers authorised him to use his own judgment to a high degree and gave him a virtually free hand.

In Reeve Angel's opinion, Star Paper Mill was the most suitable for both his own and Kymmene's purposes. The annual production consisted of 21,000 tons of newsprint, 8,000 tons of wallpaper, and 7,000 tons of wrapping paper. In Reeve Angel's view, the company's difficulties were

mainly caused by deficiencies in its sales organisation, as proof of which he took the fact that the weekly paper consumption in nearby Manchester was just under 3,000 tons, of which the three important Lancashire Mills — Star, Sun, and Darwen — supplied only 95 tons. Provided the good quality of the paper could be maintained, his company would be able to sell the whole of Star's production up to 50,000 tons. Reeve Angel also referred in his statements to the fact that it was several newspapers' point of view that the paper manufacturer should be independent of the publisher; he thought that under this banner he would also be able to sell a certain amount of paper produced in Finland, even after the tariffs had come into effect.³⁹

On the decision of the board, the chief engineers of Kymmene, Gunnar Bonsdorff and Viljo Durchman, travelled to England at the beginning of September. In a statement made on 1st November, 1930, Bonsdorff estimated the company to be worth £225,000 — a relatively low value. The mill plant was not in as good condition as the management of Star themselves thought. According to Durchman's estimate, at least £40,000 would be required to bring the plant up to good working condition, and even more if a first class condition was demanded. The final decision of the board of Kymmene was obviously greatly influenced by the estimate in Bonsdorff's principal memorandum that Star's production could be increased by about 43,000 tons and that Star's annual profit might be in the region of £20,000—£30,000, even in the event of Great Britain not introducing import tariffs on newsprint. Against this background, Bonsdorff did not consider the planned £100,000 investment in the mill to be misplaced.⁴⁰

From Kymmene's point of view, an important factor with regard to the English mills was the difficulty that might be created by leaving the mill expansion programme incomplete. This matter was especially relevant with regard to the Voikkaa plan, where the pulp mill had been expanded with an eye to purchasing several new paper machines. On completion of this, the Voikkaa pulp mill was estimated to have sufficient pulp production for annual sales of 26,000 tons, with a net profit of approximately £10,000 assuming that the plant would be used at full capacity in order to maximise production. In other words, this amount of pulp could easily have been reserved for the use of the English mill. When the mills had been expanded, there would even be enough for export purposes.

As both the financial and the technical reports seemed to point to the advantageousness of the project, Kymmene's management and Star's representatives engaged in detailed negotiations, which were held at

Kuusankoski at the beginning of October 1930, Star being represented by their Chairman, Mr. Charnock, Vice-Chairman, Mr. Rixson, and Mr. Baucher, also a member of the board. Impressed with what they had seen in Finland and in particular at Kuusankoski — in one of his letters, Reeve Angel makes specific mention of the fact that the visitors were deeply impressed by the journey and by the Finnish mills which they visited — the delegation returned to London on 16th October. Four days later the board of Star met and were informed about the results of the negotiations.

The most important point in the re-organisation concerned the share capital. The original stock was to be reduced from £500,000 to £100,000 by reducing the nominal value of each share from £1 to 4 shillings. At the same time, Kymmene was to be allocated 625,000 4-shilling shares at par, but Kymmene retained the right to allow other persons to purchase these shares, which principally concerned those who had a close relationship with Kymmene. Accordingly, the new capital distribution was as follows:

Old stock:	500,000	4-shilling shares:	£100,000
Kymmene's stock:	625,000	4-shilling shares:	£125,000
Total:	<hr/> 1,125,000 shares; capital — £225,000		

In addition, Kymmene had stipulated that a new board be elected; of the five members of the board, two were to be elected from among Star's earlier shareholders and three were to be appointed by Kymmene. The company also had to be given new Articles of Association. It was further decided in the negotiations that Kymmene was to guarantee Star's debts, which were to be changed into long-term loans at as advantageous a rate as possible.⁴²

The Star board meeting on 20th October approved the results of the negotiations held at Kuusankoski, but the board members could not reach agreement over the names of the two members of the new board. However, this argument could not alter the fact that Star was obliged to accept Kymmene's conditions on account of its poor financial situation. On 29th October, 1930 the board called a meeting at the mill of the principal shareholders; 162,000 shares were represented, and their owners did not oppose the plan presented by the board.⁴³ The following day, Reeve Angel informed Ahlman by telephone that there could be no doubt about Star agreeing to the stipulated conditions or about an agreement being reached.⁴⁴

The next phase began when the Kymmene board took up the matter on 6th November.⁴⁵ Ahlman had prepared a four-page memorandum on the matter, the main points of which were concerned principally with the Voikkaa mill extensions; it was planned to purchase four new machines, which would increase the mill's production from 45,000 tons to 100,000 tons, at an estimated cost of £80,000. The immediate modernisation at Voikkaa was a matter of some urgency, as higher and higher quality paper was being demanded and the widths of the Voikkaa machines did not suit modern printing presses. When compiling his memorandum, Ahlman obviously knew that English mills were engaged in important modernisation projects; Bowater, among others, were working hard to improve paper quality. In these circumstances, Kymmene had no alternative but to try and keep up with the times. In any case, this was something that was difficult and fraught with danger. If England was going to introduce tariffs on newsprint, which looked highly likely and which experts believed would be the case, purchasing new machines for Voikkaa was, from the point of view of profitability, questionable to say the least. The question of paper quality and, to a certain extent, the marketing policy situation, did not allow for any delays. To simplify the matter slightly, it was a question of whether it was more advantageous to build new machines in England or at Voikkaa. In his summing up of the situation, Ahlman came to the conclusion that one would not 'willingly' engage in such large scale investment programmes as the purchase of machines for Voikkaa entailed in the prevailing uncertain marketing conditions. In addition to the question of tariffs, Ahlman thought that buyers' activity on the market was influenced also by public opinion, which favoured the use of home produced paper. Against this background, a plan to obtain a majority shareholding in a suitable English paper mill had been conceived, and as it now seemed possible to get control of the share capital on favourable terms, the realisation of this plan was, in Ahlman's view, the best possible solution. There would thus be time to consider the Voikkaa expansion calmly and to see how the marketing policy situation was going to develop. Once more, Ahlman referred to the technical and financial reports, which in this case were very optimistic. During the discussion at the board meeting, Bonsdorff and Klaile, both engineers, were heard. They stated that they found the plan acceptable. After that, the board unanimously approved the transaction. The board also decided to sell H. Reeve Angel and Company 50,000 of its own shares at par.

On 9th December, 1930 Star Paper Mill Co. Ltd. held an extraordinary general meeting in Manchester. Only two shareholders voted against the arrangement proposed by the board. At the same meeting, the shareholders voted onto the board W. R. Challinor and the former Vice-Chairman, J. S. Rixson.⁴⁶ Formal confirmation of the reduction of the share capital came on 25th February, 1931.⁴⁷ On 9th December, the companies exchanged minutes concerned with the re-organisation, and the new company's initial board meeting also took place on that day. Kymmene appointed to the board Einar Ahlman, member of the board of Kymmene, Gustaf af Forselles, bank director, and Edward Reeve Angel, who also became Chairman of the Board and Managing Director, becoming associated with Star only at this juncture. Edward Reeve Angel was Henry Reeve Angel's eldest son; he was educated at the Imperial College of Science and Technology, South Kensington, and at Harvard University (U.S.A.). After Harvard University, Reeve Angel joined his father's firm and was later appointed a director. He was also a director of the company's French subsidiary, S. A. Des Usines Dura, in France near Bordeaux. In conjunction with the reorganisation an attempt was also made to reinforce the local management of the mill. Erik Palmgren, an engineer from Kuusankoski, was appointed Assistant Manager; he had previously been assistant to the Technical Manager at the Voikkaa mill. It was Palmgren's duty in particular to supervise the technical side of the company. The former General Manager, T. Holt, now became Mill Manager.

In conjunction with the changes in ownership, the company also changed its name to Star Paper Mills Limited.

In the British trade press the changes at Star were commented on mainly from the point of view of the changes in the constitution of the board. The World Paper Trade Review made a reference to Kymmene in this connection.⁴⁸ In consequence of the share capital arrangements, Star's shares continued to fall on the stock exchange. At the end of the year they were offered at a price of 2 shillings each, in other words 50 % below par.

The mill in which Kymmene had bought a controlling shareholding created a well-ordered impression on somebody seeing it for the first time. The Star mill was situated in a river valley in lush and well-kept surroundings. A pleasing element was the water and the dam above the mill, which ensured a continual supply of water. The buildings were of

brick and were largely constructed after 1905. In the style common to English factories the mill's interior was lighted with the help of skylights in the roof.

Entering the mill from the office building, a visitor would pass through it in a way which followed, more or less, the successive stages in the manufacture of paper. The mill's stockyards and warehouse could hold 12,000 tons of pulp at the same time, which was enough for 10 weeks' consumption. The pulp preparation department had 11 holanders and 6 jordan mills with their ancillary equipment. By the beginning of the 1930s the holander department had become old-fashioned, as it demanded rather a lot of manpower. The machine houses with machines I—V formed the continuation of the holander department. Machine No. I had been built by Walmsley in 1906 and completely overhauled by them in 1923. Most of the production of this 123" machine was machine-finished or super-calendered newsprint and its production was about 190 tons per week. The machine had an 8-roll calender and a 10-roll super-calender. Machine No. II was the mill's largest and most modern, manufactured by Walmsley in 1926. Its cut width was 180" and its annual production was 17,000 tons of newsprint. Machines III—V were used for the production of parchment and other packing paper, but they were so old and in such bad condition that the Kymmene engineers regarded them as having little more than scrap value.

The mill's sole source of power was steam. The boiler room, built in 1907, had 12 Lancashire boilers and 4 economisers. Most of the coal was brought right to the mill itself along the Leeds and Liverpool Canal. The mill had 9 steam engines, the largest being a 2200 h.p. engine, installed in 1905, which delivered its power principally to the holanders and the jordan mills. Each paper machine had its own steam engine, delivering from 100 to 700 h.p. Electricity was used continuously; there were several separate generators, with their own circuits and voltages. As the mill only produced very standard quality paper, the packing and shipping departments were very simple. The manufactured paper was shipped either by rail or occasionally along the canal to the printing presses in the town. The mill employed about 400 persons.

c. Star's purchase of Yorkshire Paper Mills

Among the new board's very first actions was the decision to open negotiations with Yorkshire Paper Mills in Barnsley with a view to the purchase of that company. H. Reeve Angel had become acquainted with the Yorkshire company when he was making enquiries about an enterprise suitable for Kymmene's purposes. The fact that some shareholders in Marsden's firm also had considerable shareholdings in Star made it all the easier to establish contact.⁴⁹ In a letter to Ahlman dated 17th November, 1930, H. Reeve Angel mentioned that he had recently been trying to discover what he could about the Barnsley mill. Reeve Angel thought that the Yorkshire mill might be suitable for Kymmene's purposes, should the negotiations with Star come to nothing, and so he had started negotiations with the officials responsible for the bankrupt company.

The manufacture of paper at Barnsley commenced in the 1860s, when a paper mill bearing the name Valley Paper Mills was founded and started functioning at Smithies. The present Barnsley paper mill was founded in 1867 when the Sheffield firm of Charles Marsden and Sons had a paper mill built on the River Dearne at a site later called the Lower Mill, where there had previously been a bleaching works.⁵⁰ Later, around 1890, Charles Marsden extended the mill by building the so-called 'top-side buildings' by the Aire and Calder Navigation Canal. The Barnsley mill was a typical English mill set in a valley, with a chimney not nearly as high as the summits of the surrounding hills. The mill drew its water requirements from the adjacent Dearne river and its fuel came from the nearby coal-field. From the point of view of transport, the enterprise was very conveniently situated, as the canal which passed right by the mill stretched as far as Goole, near Hull, and so the mill had its own barge harbour as well as a water connection with the sea. The large towns of Yorkshire formed the mill's natural marketing area and the waterway made the transport of products possible to almost any part of the kingdom. In 1890 there were four paper machines in the mill, with widths varying between 60" and 70".

Judged by English standards, the prerequisites for the mill's functioning were good; in spite of this, the firm had difficulties and bankruptcies were practically a regular part of its activities. The above-mentioned Charles Marsden was in control of the firm for the longest time. In 1924 the Marsden company's capital was re-organised and the mills passed into the hands of the Dearne Paper Works Ltd., which had been established



Map showing the position of Star's mill at Barnsley. On this map, published in the mid-1920s, the name of the company appears as the Dearne Paper Works. The oldest part of the mill is the Lower Mill complex on the River Dearne, where paper machine No. III was still in position in the 1930s. The remaining machines were in the larger part of the mill, the 'top side buildings', dating from about 1890, past which flowed the Aire and Calder Canal.

especially for this purpose. Most of the shareholders were Oxford undergraduates, who regarded the mill mainly as a kind of experiment; as they could not raise the purchase price of the mill, it remained in the hands of Marsden's creditors. In 1925 a new entrepreneur appeared on the scene when Mr. Charles Diamond founded a company called Yorkshire Paper Mills Limited. The company's shares did not, however, sell well, and therefore the company had to rely on bank credits in order to obtain its working capital. The management of the company was not competent enough, either. In 1925—1927 the company's direct trading did, indeed, produce more profit than loss, but not enough, however, to cover interest on external capital and mortgage repayments, not to speak of new investments. In 1926 the coalminers' strike caused the mill a loss of £20,000, and in the winter of 1929 the difficult ice conditions in the seas of northern Europe raised the price of pulp and cellulose to such an extent that the mill's paper production became unprofitable. During the economic crisis in August 1930, the company's banks called in their loans; when this happened, the enterprise went into liquidation, and it ceased functioning in mid-November 1930. On the last day of December, 1929, the company's own capital (the original shares and preference shares) totalled £221,067 and debts £111,452. The mill's annual production of paper was about 16,000 tons, consisting mainly of printing paper, newsprint, and notepaper.⁵¹

To a limited extent, the bankrupt mill was at the mercy of a possible buyer. Reeve Angel announced in a letter to Ahlman that he had made the receiver such an impossible offer for the firm that he imagined this would put an end to all the negotiations. The burden of Reeve Angel's offer was that £60,000 would be paid for the mill together with its stocks and all rights, the payment to be made over an 11-year period. To Reeve Angel's surprise, the offer was not rejected, but the creditors showed interest in the proposed transaction. In the letter mentioned above, Reeve Angel once again suggested to Ahlman that he send Bonsdorff, his engineer in chief, to England in order to examine the mill. Provided the plant was in reasonable condition, the purchase could in any case be considered seriously because "the price is but a bagatelle and . . . we have herein an opportunity to make an expansion that may never recur".⁵² All the available information about the company was indeed obtained and the Kymmene engineers examined the mills but giving a statement about them was a thankless task: as the machines were not running, it was difficult to determine their true condition.

At the turn of the year (1930—1931), the purchase of the Barnsley mill came up in discussions between H. Reeve Angel and Ahlman. To start with, Reeve Angel had suggested that Kymmene should buy the mill for itself; however, Ahlman turned down this suggestion, because one consequence would have been competition between two Kymmene firms. Furthermore, from the very beginning Ahlman had been very insistent on the English character of the firms. Ahlman was also somewhat hesitant about the arrangement whereby Yorkshire Paper Mills would be bought for Star and be placed under Star's control. In December 1930, Ahlman visited Barnsley on his way to Blackburn; he got the impression that the company was badly run, but that it possessed relatively new machines. The main motive for buying the Barnsley mill was to let it begin specialising in the production of high quality printing paper and packing paper, while Star would remain as a mill which mainly produced newsprint and packing paper.⁵³

When the matter came up for final decision on 6th January at a meeting of the board of directors of Star, the chairman announced that it had been decided in discussions between Ahlman and himself that if the purchase of Yorkshire Paper Mills caused a shortage of working capital for Star, Kymmene would increase Star's credit. Accordingly, the board thought that by decreasing Star's stocks there would be enough funds for this purpose. During the negotiations, which had already been completed, a price of £55,000 had been agreed on for the mill, the mill site, together with equipment, stocks, and rights; £15,000 was to be paid in cash, the remaining £40,000 to be paid within four years. The sale price was very low and corresponded to the amount of money that had been spent on nothing more than repairs to machinery and buildings during the period 1925—1929. In the prevailing economic conditions in England, however, the price is understandable; it is reasonable to deduce that the receivers were pleased to get any kind of buyer.

Before committing itself to the purchase, Star's board referred the matter to Kymmene's board. On 16th January, 1931, they unanimously decided to authorise the managing director to take measures for Star's purchase of Yorkshire Paper Mills.⁵⁴

3. Bad and better times

a. Star Paper Mills at the beginning of the 1930s

Star's first board of directors included E. Ahlman, Gustaf af Forselles and Edward Reeve Angel, all nominated by Kymmene. The other shareholders were represented by W. R. Challinor and J. S. Rixson. The board functioned in this form a couple of years. In 1932 Erik Palmgren, the technical manager of the company, was elected to the board in place of af Forselles. In 1933 Ahlman resigned his position and was replaced by Theodor Wiklund, another sales director from Kymmene.

The purchase of the Star Paper Mill and Yorkshire Paper Mills added greatly to Kymmene's interest in the English market and forced the company into a closer contact than before with this part of Europe. Especially during the period when Star was showing a loss, the parent company closely supervised the running of its affairs. The Barnsley mill's difficulties in particular led to many fact-finding trips. In 1931 Björn Sucksdorff, engineer, was nominated technical director of the Barnsley mills and in the same year Mr. Charles Blake became the local manager of the mill.

When the supervision of Star passed into Kymmene's hands, the activities of its board acquired distinct features of the mother company; the board stopped worrying about details and in exactly the same way as at Kuusankoski, financial forecasts were beginning to be made for the succeeding months. As long as Star showed a loss and it had to trust to Kymmene's aid, its board consulted the parent company's opinion in all important matters. The mill's internal book-keeping was changed and, especially at Barnsley, much more precise methods of reporting were put into effect. Kuusankoski was very much aware of what was happening at Star, because the staff sent to England by the company reported on Star's situation frequently and in detail. With the aid of this correspondence it is also possible to get a very detailed picture of Star's position at the beginning of the 1930s.

During the time of the previous board of directors, enough paper to fill the warehouses had been produced, regardless of orders, and at the same time a lot of capital had been tied down in stoks, and pulp and cellulose stocks were too big. From now onwards paper was manufactured to order;

production was slowed down at the very beginning of 1930 and during the first half-year, the machines worked at no more than half their capacity. In addition, the end of March saw a strike in the paper industry, during which ten working days were lost.

Star's production programme was not changed much during the early 1930s. A large number of improvements and repairs were made at the mill: the effectiveness of pulpers and pumps was increased; changes were made in the hydraulic systems of the machines, and, because of the great steam consumption, rectifications to boilers and machines were made. The greatest individual purchase was a super calender for Machine No. 2.⁵⁵

From the technical point of view Star gave some cause for concern, but the Barnsley mills created even more trouble, for rain and the seeds of trees came in through the roofs, with the result that green coloration was beginning to be visible on parts of standing machinery. One of the new owner's first tasks was to repair the decaying buildings.

When Star obtained control of the Barnsley mills, the essential part of the mill comprised five paper machines, as follows:⁵⁶

Machine	Originally built	Weekly production
P. M. I	before 1890	40 tons
P. M. II	1909	110 tons
P. M. IV	1914	80 tons
P. M. V	1921	35 tons
P. M. III	before 1890	35 tons

These production figures were very poor for the beginning of the 1930s and they clearly showed that the firm was not up to date. The average weekly production of the five machines was 60 tons. The weakest of the machines was P. M. V., which produced M. G. paper and it alone was said to be the reason for the mill's bankruptcies. The machine could not be made to function properly until it had been rebuilt in 1933. Basic errors, made in connection with its earlier installation, were then discovered; among other things, rollers rotated in the wrong direction.

The new owners regarded other equipment at Barnsley besides the paper machines as very ineffective; beginning with the cranes at the barge quay and ending with the moving equipment for finished products, as many improvements as possible were made at the mill. Even within a year the effectiveness of the machines had been considerably increased; P. M. II's daily production was increased to 60 tons, and the corresponding figure for P. M. I went up to 35 tons.⁵⁷

As happens in so many similar instances, a certain kind of moral decay was apparent in the firm, which was in such a bad state. Barnsley's bad reputation made it difficult for the mill to get first class men. Discipline had weakened and it is revealing that the same repairs and alterations had to be repeated several times over, even in the years 1931—1934 before the part in question was in acceptable order. Above all, the mill's technical department was the target of justifiable complaints. The mill's internal organisation also showed itself to be slack and deficient, which led to considerable changes being made when the mill came under Star's control.

After the necessary servicing and repairs, the mill was re-started in May 1931. The first machines that could be taken into use were machines I and IV and in June, machine No. V. When the mill was started again it was calculated that running three machines would produce a profit; later, it became apparent that this was not the case. The fall in the price of paper made it imperative that P. M. II and, at the end of 1932, also P. M. III be started up.

During the next few years, Star's Blackburn and Barnsley mills faced considerable difficulties. In addition to technical problems, the English paper tariff was lowered in 1932 and 1933, and in the latter year, especially, the dumping of central European paper confused the English markets.

b. The Mills during the Depression

In order to give an overall view of the position of these two mills at the beginning of the 1930s, their financial results are presented below; there are separate figures for trading results and net balance (Balance, Net Profit, Net Loss). The latter figure includes, among other things,

commissions, interest, and, above all, amortization. In the table, both figures are given to the nearest pound. During this period, the accounting year ended on 31st December.

Year	Trading result		Net result ⁵⁸
	Star	Yorkshire	
1931	669	— 8829	—
1932	23035	—13105	—36,027
1933	16073	—23658	—38,537
1934	—1560	—15623	—49,710

The figures show rather depressing results for this period. In the years 1932—1934 the company's net loss was £124,274, an amount almost identical to the sum Kymmene had used in order to obtain power of control in the company.

From the correspondence of these years it appears that Star's management thought that the difficulties were the result of the small number of orders, the low prices, and the technical weaknesses in the plant. The fierce competition in the paper market forced the technical management of the company to lower production costs and to manufacture new products. Judging from the correspondence, the technical management took the view that the mills must be able to produce paper profitably, even in a price situation where it was profitable also for the competitors to maintain production.

In actual fact, Star's trading was strongly influenced in these years by the economic depression. Difficulties began in England even in 1928, when the country's gold reserves started to dwindle. At the end of 1929 international trade decreased, when every country tried to limit imports and increase exports with the aid of tariffs, restrictions, and exchange controls. In England the crisis was at its worst during the last quarter of 1931 and in the year 1932. Real national income fell from 100 points in 1929 to 99.2 points in 1932; during the same period, employment dropped from 100 to 95.4 and the volume of exports from 100 to 62 points. In 1932 the average number of unemployed was nearly three million persons. On 21st September 1931, England went off the gold standard and the country, so to speak, went bankrupt. Another consequence of the economic factors of the period was that free trade was denounced and the country changed over to protectionist policies.⁵⁹

The number of orders that Star's Blackburn and Barnsley mills received during these years was not, however, particularly low, but in any case it was not as good as Reeve Angel had wanted to believe before the purchase of the mills, namely that the whole production could be sold provided that the quality was good. Some persons closely connected with Kymmene pointed out in their statements that before the purchase Reeve Angel had considered the mill's difficulties to be the result of a poor sales organisation but that he himself was unable to organise matters any better. In the first half of 1931 only a little more than half of the Blackburn mill's capacity was in use. The second half of the year, however, gave a slightly better result and in general there was sufficient work for four machines. The Barnsley mill was not ready to start production again until the beginning of the summer, so it was not possible to expect very much from it until the following year; however, during the latter half of 1931 its weekly production was in the 350—400 ton range.

In the middle of 1932 Barnsley's main production consisted of 15 products; machines I and V produced M. G. papers, machine II produced kraft paper and newsprint; machine III had been taken into use so that part of the kraft production could be transferred to it and machine IV produced thin wood-free printing- and note-paper. The mill's production programme was varied enough, but it did not seem to include any paper quality where the mill was competitive. Because of a fall in the price of paper in 1932, all 15 of the mill's main products showed a loss; a loss of £1 per ton was quite common, but with some qualities, the loss was as high as £3—£4 per ton. The mill's competitive position can be seen by examining the figures concerned with the production of Bank and Bond papers; their selling price on the United Kingdom market was £20. 7. 0. — £20. 10. 0. and the international cif price was approximately £21, whereas at Barnsley the production cost was, on average, £26—£27. This was such a high cost price that not even paper tariffs could ensure a home market and exporting was quite out of the question.⁶⁰

At the beginning of 1932 the growing number of orders gave a more promising outlook than before, but towards the middle of the year the market situation again deteriorated and there were few orders, except for newsprint from the Blackburn mill; many machines stood idle. At this juncture, the company had no cash in hand and it needed immediately about £40,000. The board were forced to ask Kymmene for a loan and for the first time, the board of management at Kymmene became concerned about

the state of affairs at Star. In a long report on Star's position. Ahlman, who had been visiting the mills in the summer of 1932, stated that the reasons for the difficulties were the bad economic situation, the costs of repairing and starting-up the mills, which were higher than estimated, and — worst of all — miscalculations in sales estimates. The target prices which were set when the mills were bought were not in fact obtained, as prices had remained much lower than forecast. Nor could the machines produce as much as had been calculated. As in other respects the sales activity gave rise to suspicions concerning its efficiency, the sales director, Mr. Herrmann, was sent to England to investigate the situation.⁶¹ According to his observations, it was not to the advantage of the sales management that one of the directors of the Reeve Angel firm had been appointed production manager just when there would have been a need for larger sales. Apart from that, Herrmann could only state that in the completely confused market situation it was difficult to sell paper; however, he stressed that, according to his observations, Reeve Angel was doing his best to sell the paper produced at Barnsley and Blackburn.

The Kymmene board of management had no alternative but to approve the loan, on which an interest rate of 6 % had been calculated. In August 1932 the Star board had used up £60,000 of the £75,000 loan, which came in the form of pulp and cellulose. One mitigating factor was that just at that moment it was very difficult to place the excess of cellulose and pulp on the world markets. However, when informing E. Reeve Angel about the granting of the loan, Ahlman complained about the over-optimistic calculations that had led to the purchase of the mills and he advised the Star management to decrease their stocks.⁶²

In the latter half of 1932 the English paper market was in a chaotic state: during a single month, the price of some quality paper might drop by 25 %, only to rise again when several producers had stopped manufacturing it; the paper industry's position was also affected by the fluctuating tariffs: in 1931—1932 several paper qualities enjoyed a 50 % tariff protection, which was such a high threshold that several manufacturers were enticed into increasing their production, but when the tariff was lowered to 20 % in April 1932 there was no way of preventing the markets from becoming swamped during the second half of the year. In these conditions mills — and especially mills like Barnsley — experienced great difficulties and nobody could predict with any degree of certainty what the future demand and price would be for any particular paper quality. The sales force found it difficult to operate in

such conditions, which was why the inflow of orders was very sporadic: at times there were too many orders of certain qualities for the machines to cope with; nonetheless, most machines ran at less than their full capacity.⁶³

In November 1932 Ahlman again visited England in order to acquaint himself with the situation, but no particular changes were made at that point in the mill's activities. However, in order to obtain better control, Th. Wiklund had been sent to England on a temporary basis; his brief was to ensure that only profitable orders were accepted and that Kymmene's bills were paid, as far as this was possible.⁶⁴

In 1933 the situation worsened even further; the Blackburn mill had enough newsprint orders, but the price quoted was such as would inevitably entail a loss for the manufacturer, it being only a question of keeping this loss as small as possible.⁶⁵ Even if the Blackburn mills seemed to be coping somehow or other, the situation at Barnsley caused much more concern. A great deal of patience and time was demanded just to restore the run-down mill to a competitive position. Production at Barnsley was further hampered by its former bad name and in the prevailing buyers' market there were frequent complaints about product quality; the end of 1932 and the beginning of 1933 was a particularly bad time in this respect.⁶⁶ Difficulties in those years were increased by the reduction in the English tariff on wrapping paper. It became apparent once again that Barnsley was not capable of producing the most important paper qualities at a competitive price, as its cost prices were again several pounds higher than its competitors'. It was in particular the Barnsley mill which caused the company's lack of liquidity in 1933.⁶⁷ Kymmene again had to provide a loan, this time the amount being £52,000. Now, however, Kymmene was becoming displeased at the way matters were turning out; its English investments were not proving to be the money-makers they had hoped them to be — just the reverse. At the spring general meeting, criticisms were voiced about the whole operation and Ahlman had to intervene firmly, the purchase of the mills being largely his responsibility. This was at the end of May 1933.

On his journey to London, Blackburn, and Barnsley, Ahlman was accompanied by the engineers E. Klaille and Tryggve Wiklund and the sales director, Th. Wiklund, and they were joined by the local directors of the Blackburn and Barnsley mills for a series of meetings which lasted for five days. At the start of the meetings Ahlman announced that Kymmene was not prepared to continue bearing the mills' losses and that the

situation would have to improve. It appeared during the course of the meetings that disagreements among the management were one general reason for the difficulties, but this, however, was a matter of secondary importance. The main issue in the discussions was the fate of the Barnsley mill; the English as well as the Finnish members of the board and the other participants at the meetings were of the opinion that the Barnsley mill would have to be sold; however, it was equally obvious that this solution was no longer practicable, for if Kymmene could not make the company produce a profit, nobody else could, which meant that in the event of a possible sale the mill would only have scrap value. As far as these mills were concerned, Kymmene had been placed in an almost impossible position: it could not get rid of them, but making them profitable was a very difficult proposition. Of the many possible solutions to the problem posed by Barnsley the following was chosen: the mill was to start producing fewer fine qualities than before and these were to be sold at a profitable price. At the same time, certain alterations were to be made in the plant and in particular, sales of fine paper were to be put on a new basis; these had been in the hands of H. Reeve Angel and Co. following the purchase of the Barnsley mill. The board regarded this arrangement as unfavourable marketing policy, as the sale of paper through just one agent prevented competition between agents; it was also considered a drawback that Reeve Angel and Co. were primarily known as importers of foreign paper and as such they were expected normally to sell paper at a lower price than that of English-produced paper. For this reason, the board decided on measures whereby the sale of fine paper was given to smaller agents, each one of whom was responsible for a certain area.⁶⁸ If there were not enough orders at a suitable price, the production of some machines was simply to be cut back. Thus, in the autumn of 1933 the sale of fine quality paper produced by Barnsley passed into the hands of three agents.

The latter half of 1933 was a critical time for Star, as for many other English paper mills. Towards the end of the summer, all five paper machines at Star were actually running, and they had enough orders, but the price of paper, newsprint in particular, was not satisfactory; the current price of newsprint was £9. 15. 0. per ton, but at this price the mill made a loss of £1 on every ton. On the other hand, there were few orders for the Barnsley mill, so that only two machines were working there at normal capacity. In August 1933 the losses did not look like getting any smaller, and so the Star board suggested that the Barnsley mills be closed; in September, the company management were quite

nervous about the situation at Barnsley. In a telegram to Kuusankoski, the Star board suggested 'final' measures as regards Barnsley, and the chairman of the board already knew of a possible buyer. In consequence of this, the chief engineer, Bonsdorff, travelled to Blackburn and Barnsley; in addition, Ahlman expressed his views strongly by letter. Both Ahlman and Bonsdorff expressed their dissatisfaction at the Star board's actions. The sale of Barnsley came to nothing, as the buyer backed out. It also seems that Kymmene steeled itself to take firmer measures to put matters right. While Bonsdorff was in Blackburn, the sale of the Barnsley mill's fine paper was reorganised.⁶⁹ The large losses that had been incurred and especially the unsatisfactory state of the sales set-up caused Star's managing director, E. Reeve Angel, not to renew his contract when it expired at the end of 1933. Th. Wiklund was appointed the new managing director on a temporary basis.

* * *

The losses suffered by Star provide a good reason for comparing production costs of paper at the Blackburn mill and at Kymmene's Finnish mills. Kymmene now controlled two paper mills which were very alike: the Star mill at Blackburn and the Kymmene mill at Voikkaa; the latter's principal products was newsprint and, as has already been mentioned, the former mainly produced newsprint, wallpaper and 'Hercules' paper. As far as their capacity is concerned the two mills were virtually in the same class: at the beginning of the 1930s Voikkaa was capable of producing 47,000 tons per year and Star's Blackburn mill about 40,000 tons. As no new paper machines had been purchased for Voikkaa since World War I the Blackburn paper machines were much more modern; the capacity of the largest machine at Voikkaa was 8500 tons of newsprint per year, whereas at Blackburn the annual production of the largest machine was 15,000 tons.

The cost sheets of both mills were prepared in such a way that a direct comparison of production costs of newsprint at Voikkaa and at Blackburn is possible. The following table presents a comparison of production costs for the years 1932—1934, prices being expressed in shillings per ton. The rate of exchange used for converting Finmarks to pounds sterling is 227 Fmk = £1 ; 1 shilling = 11.4 Fmk.

Voikkaa Mill				Blackburn Mill		
Shillings per ton				Shillings per ton		
1932	1933	1934		1932	1933	1934
59.6	54.5	62.7	Raw Material	126.9	115.0	119.0
			of which			
20.2	17.6	20.6	Chemical Pulp	45.3	42.2	44.5
36.9	34.6	40.0	Mechanical Pulp	73.6	65.8	67.6
2.5	2.3	2.1	Other	8.0	7.0	6.9
42.3	46.9	40.4	Works Cost	61.4	65.9	69.2
			of which			
9.6	9.5	8.9	Wages	20.4	19.7	22.4
6.0	6.4	5.0	Clothing, etc.—	8.9	10.9	8.0
3.9	4.2	4.2	Packing	3.0	3.2	2.1
16.8	15.9	16.2	Steam & power	19.4	23.3	21.3
5.4	10.4	5.6	Repairs	9.5	8.6	15.3
0.6	0.5	0.5	Other	0.2	0.2	0.1
17.1	18.1	14.9	Overhead Charges	21.5	23.7	22.9
119.0	119.5	118.0	Total Manufacturing Cost	209.8	204.6	211.1

When comparing these statistics one should bear in mind the fact that the newsprint produced by Star contained about 30 % of chemical pulp whereas the paper produced at Voikkaa contained 21—23 %. This resulted in the paper produced at the Blackburn mill being slightly more expensive. In other respects the quality of the paper was the same. There was a slight difference in the size of the paper ton: Voikkaa used the metric ton (1,000 kilos), but Blackburn used the long ton (1,016 kilos). However, when making comparisons these factors have no real significance.

The statistics show that the production of newsprint at Blackburn was approximately 70 % more expensive than at Voikkaa. Raw material costs at Blackburn were nearly double those at Voikkaa. Works costs at the Blackburn mill were about one-third greater than at Voikkaa, and, in spite of the nearness of markets administrative costs were greater at Blackburn than at Voikkaa. Among the production costs proper, only packaging costs were lower than at Voikkaa, since Voikkaa despatched paper to different parts of the world and packaging, therefore, had to be durable. Steam and power costs were also lower at Voikkaa than at Blackburn, which was due in part to Voikkaa's water power; but it can also be

stated that although there was a coalfield near Blackburn the cost of producing steam at Star's mill was not much less than at Voikkaa: the difference per steam ton generated was 4 pence in Blackburn's favour (32 p. — 36 p.). At Blackburn wages and salaries per paper ton were more than double those at Voikkaa, since the mill's work force numbered 550 in 1932 as against Voikkaa's 320, notwithstanding the smaller production at Blackburn.

As has already been mentioned, there were almost insuperable difficulties at Star's Barnsley mill in bringing its products up to a competitive standard. The company's losses and its calculations gave reason for querying the mills' continued production policy.

c. In search of a production policy: 1934—1939

Star's new managing director was elected in 1934; he was Henry George Bradly, 54 years old, and a director of Lepard and Smiths Ltd., one of the oldest and most highly regarded paper wholesalers.⁷⁰ Bradly, who had nearly 30 years of experience in the paper trade, was also nominated chairman of the board. Other members of the board during these years were Th. Wiklund, E. Palmgren, W. R. Challinor (until 1937) and W. B. Vincent (from 1937). Bradly died on 17th August, 1938, after being Star's managing director for only four years. The passing of this capable man is lamented in the board's obituary. The choice of words is most certainly right, for under Bradly, Star was transformed from being a loss-making concern into one that made profits.

When negotiating his contract Bradly had expressed the view that the Star mills should move away from producing those qualities where there was most competition and should try to turn to producing special qualities. As the Barnsley production programme had not been decided on when he became managing director, he had a good opportunity to put his thoughts into practice. In May 1934 a plan for the reorganisation of Barnsley's activities was produced. The main feature of the plan was that the mill would specialise in the production of fine paper. For this reason, a number of alterations were made to machines II and IV; their holanders were renewed, their hydraulic systems were rebuilt, the dry head of

machine IV was renewed and in addition a large number of other improvements were made to the equipment. The cost of these improvements was about £50,000, or almost as much as the purchase price of the Barnsley mill.⁷¹

In response to the company's efforts, the quality of their paper improved and orders increased. In a statement made at the beginning of 1935 Bradley assumed that, because of the improvement in quality, the company could soon start thinking of raising their prices. In 1935 production at Barnsley exceeded 11,000 tons, which was more or less double the previous year's production. The mill's income was also increasing and at the same time its production costs were being reduced. In the selling policy at Barnsley there was a tendency to expand the volume of business in profitable grades to such an extent that unprofitable grades might be eliminated. Furthermore, Bradley supervised the quality of the paper with extreme thoroughness, so that only paper that was of the highest quality was despatched to the buyers.

While the situation at the Barnsley mill was improving, the Blackburn mill started giving more and more cause for concern. They produced newsprint, imitation parchment, and wallpaper, which were always more difficult to sell at a profitable price because of hard foreign competition. At the beginning of 1935 Bradley wrote to Kuusankoski that Canadian newsprint was being offered in England at a price below the English mills' cost price.⁷² In these conditions, it became increasingly clear that the Blackburn mill would have to try and find a line of production where there was less competition. First, it was decided to commence the manufacture of bank-papers and cheap mechanical printings; these lines became well-established and showed signs of expansion.

The most important development at the Star mill, however, was the acquisition of a licence to manufacture process-coated papers, with exclusive selling rights in the North of England, Scotland, and Ireland. The production of coated papers marked a completely new departure for Star. In 1935, when Edward Reeve Angel was visiting the Consolidated Water Power and Paper Company in the United States, he saw a machine where the paper was coated on both sides with pigments while it was in the coating unit. This paper resembled 'art' paper in appearance and printing characteristics, which were of a high quality. The main technical difference was that whereas under the old system coating was carried

out on a separate machine the paper was now produced and coated on the same machine. Reeve Angel saw the value of the process and managed to buy the patent rights for Europe. On his return home from the U.S.A. with paper samples, E. Reeve Angel immediately offered the process to England's biggest paper manufacturer, Edward Lloyd Ltd., who showed great interest. In addition, Reeve Angel talked about the matter to Bradly, who was also very interested in the paper samples which Reeve Angel had brought. Bradly asked Reeve Angel to find out about the costs which would be entailed by converting machines to this kind of production.⁷³

In the summer of 1935 the matter came up for consideration both at Blackburn and at Kuusankoski. Towards the end of June 1935 Ahlman wrote to Bradly that the matter was, in his opinion, 'of considerable interest'. Kuusankoski also conferred with Reeve Angel about licensing conditions. At a meeting held on 17th July the Star board decided to buy the patent and at the end of August the Kymmene board of management approved the measures taken by the Star board.⁷⁴ After that, the equipment necessary for the Massey patent started to be installed on machine No. 1 at Star's Blackburn mill. The alterations cost about £40,000. Bradly was extremely optimistic about the usefulness of the process and in February 1936 he mentioned in a statement to the Star board that by the time this machine was working at full capacity there would be an end to the Blackburn mill's losses.⁷⁵ The installation of the machine at Feniscowles was commenced in the summer of 1936, the work being completed by Christmas 1936. However, the machine took so long to run in that it did not produce much marketable paper until the middle of the following year. In 1937 the production of coated paper was 2900 tons and in 1938 2100 tons.⁷⁶

Under Bradly's leadership, the Star mills' paper production was as follows:

year	tons	
	Blackburn	Barnsley
1935	25,258	11,389
1936	30,494	15,023
1937	37,613	17,250
1938	23,607	14,576

Although a new line of production had been started, Star was still principally a newsprint producer. The following figures show the approximate distribution of production by grade:

Newsprint	62 %
Wallpaper	17 %
Coated Papers	8 %
Hercules Parchment	7 %
Other Qualities	6 %
	<hr/>
(Total	100 %)

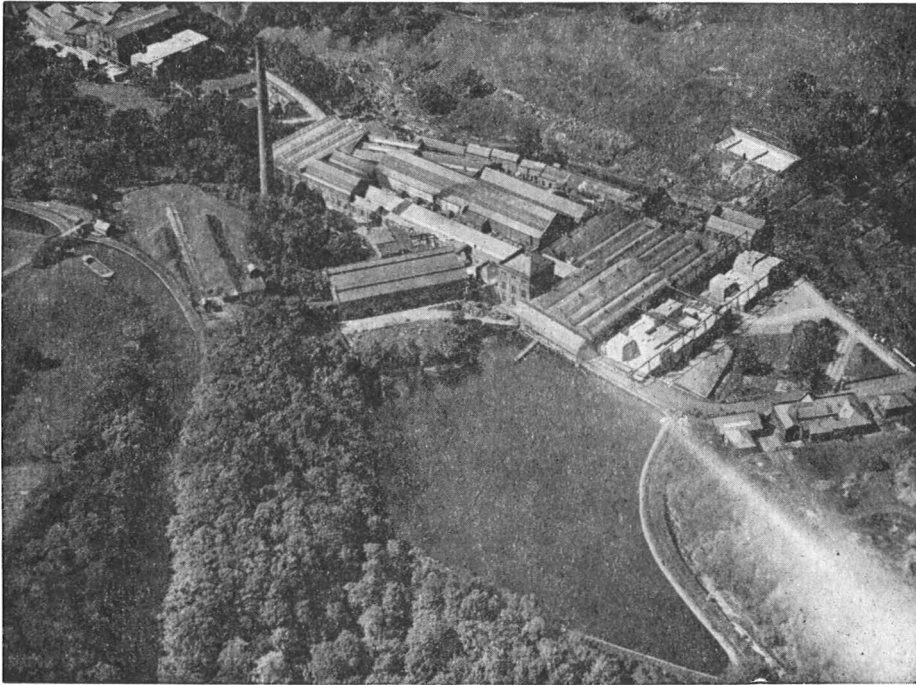
Barnsley's production, on the other hand, was distributed as follows:

M. G. Papers	27 %
M. F. & S. C. Papers	73 %

and at the end of the 1930s its most important paper qualities were as follows:

	percentage of total production
Pure Printings	15 %
Imitation Art	14 %
Mechanical Printing	10 %
Mechanical Envelope	10 %
Pure Litho	9 %
Others	42 %
	<hr/>
(Total	100 %)

The increase in paper production between 1935 and 1936 was due in part to the completion of the alterations made to equipment in 1936 and in part to the fact that markets were more stable than a few years earlier. The fine paper trade in particular was improving towards the end of 1936 and in 1937 especially markets were good from the producers' point of view. There was a periodic shortage in some qualities and because of this, 40 % of the Blackburn mill's production was of paper more highly refined than newsprint. Admittedly, the machines were not very suitable for this purpose, but paper produced on them during the boom sold well. The advantage of producing fine paper also became apparent the following year when the English paper market was again confused. Because of the rise in prices the previous year, buyers had bought larger amounts of paper than they could use and because of this, mills had few orders and machines were running only part-time. Towards the end of spring 1938, Star's Blackburn mill was using only 50 % of its capacity and the Barnsley



The Star Paper Mill in the 1930s with the Leeds—Liverpool Canal (on the left)

mill about 75 %. Notwithstanding this, the company showed a profit, which in that year came mainly from process-coated paper and fine quality papers.⁷⁷

In the middle of the 1930s the production of newsprint at Blackburn was still beset with difficulties. On the English market, the price of this type of paper remained almost at the same level to which it had fallen at the beginning of the 1930s. As the mill was endeavouring to change over to higher quality paper grades in the second half of that decade, the decreasing production of newsprint meant a rise in cost price.

The calmer atmosphere produced by trade policy towards the end of the 1930s meant that there was a chance to consider the position of Star Paper Mills within the concern. It had to be admitted that in the external circumstances then prevailing, the production of newsprint at the English mills should be discontinued. This decision was made on the basis of

production costs; between 1933 and 1935 the cost price of newsprint produced at the Blackburn mill was, as earlier mentioned, £10—£11 per ton, whereas at Voikkaa it was on average £6 per ton to which freight charges of approximately 30 shillings had to be added on paper being shipped from Voikkaa to England. However, towards the end of the decade, the price differential increased still further in Voikkaa's favour, which showed clearly that Star's newsprint could not compete with Voikkaa's and that it was, therefore, advisable for Star to change over to other qualities.

The high newsprint production costs at the Star mill were probably not very exceptional in England; a 1936 source mentions that Reeds were at that moment about to open a new paper mill which would operate with two large new machines and that production costs at that mill would be twice as high as at Voikkaa.⁷⁸

In 1935 Star's loss was £39,385, the poorest result for five years; during the years 1930—1935 Star's losses totalled nearly £180,000. Because of these losses, a re-arrangement of the company's financial situation became advisable. The share capital had to be decreased and further capital had to be obtained for the improvements. In the view of the Kymmene board of management, the company had lost its equilibrium, and this created a bad effect on its reputation.

This re-organisation was demanded by the Kymmene board of management, and in particular by Ahlman, at the turn of the year 1935—1936. This was a propitious moment, because conditions seemed to be improving just then. Capital was also needed urgently for new machines, and the only available means for this was to increase the share capital. The Kymmene board of management suggested that the re-arrangements be made in such a way that shares having a nominal value of 4 shillings should be converted into one shilling shares; in other words, the capital of £225,000 should be reduced to £56,250. The capital would then be raised to £225,000 again by means of a rights issue of 3,375,000 shares of one shilling nominal value, and which could be subscribed for on a basis of 3 new shares for every old share.⁷⁹ At the same time, the Kymmene board of management prepared for the fact that the English shareholders might be unwilling to subscribe additional capital, the whole amount then going to Kymmene, in which case the parent company's holding would total £168,750. At Kuusankoski as well as at Blackburn they were prepared for objections to the arrangement being raised at the general meeting.

On 30th January, 1936 the Star board decided to call an extraordinary general meeting, which was held on 22nd April; this meeting passed the board's proposal to re-organise the company's capital.⁸⁰

In 1936 the company's affairs began to take a turn for the better, for this was the first time since 1930 that both Star mills produced a trading profit: for Blackburn this was £14,000 and for Barnsley a modest £500. Notwithstanding this, there was an overall loss that year, resulting from the capital and interest payments. The results for 1936 and the following years may be seen below:

year	profit/loss
1936	—£23,720
1937	£37,784
1938	£10,068
1939	£31,438

After 1936 separate results are no longer published for the different mills, but instead a net result is given for the whole company. The figures show that the boom in the paper market in 1937 influenced the company's results very decisively. In the trading year of 1938, which was internationally difficult, the company managed to make a profit, even with production below capacity; the following year, with its somewhat exceptional conditions, also gave a good profit. In spite of the results obtained during these years, the company did not recommend a distribution of dividends; only in 1939 was a dividend declared, but even then, the operation should be regarded more as a repayment of debt to Kymmene than a distribution of dividends on the basis of normal business principles.

Star's share capital was re-organised in the autumn of 1940, when the share capital was increased from £225,000 to £450,000 by the creation of an additional 4,500,000 ordinary shares of one shilling each.⁸¹ The increase in share capital was caused by an imbalance between the extent of activities and the need for capital. At the turn of the year 1939—1940, H. Hague, director of the company's accountants, drew attention to this fact. According to Hague, a company should have a share capital sufficient to cover the value of its fixed assets and also provide sufficient working capital for the requirements of the business. But this was not the case with Star. The deficiency was calculated at about £350,000. This meant that the company was compelled to borrow money for essential business

purposes, but the borrowed money was a very unstable form of finance, particularly during trade depressions. Until now, by far the most important creditor was the Kymmene Company. In spring 1939 the firm's short term loans totalled £445,000 nearly all of which was owing to Kymmene: this was approximately one-quarter of all sums loaned by Kymmene. In addition, the accountants pointed out that the company's real assets were larger than shown in the books, and there was a clear difference between the book value and the real value of the mills.⁸²

The share capital was doubled by means of a rights issue on a one-for-one basis. In practice, Kymmene purchased nearly all the new shares, as before, since the other shareholders did not wish to exercise their right; only 1 % of the shares went to persons not connected with Kymmene.⁸³ At the same time, Kymmene converted the company's debts into shares. In the company's balance sheet, this appears as a reduction of the sum owing to Kymmene to £56,000 and a doubling of the share capital.

Before his death in 1937, Ahlman was able to see things changing at Star. In Kymmene's annual report for 1936 he wrote that conditions at Star had taken a turn for the better and he expressed the opinion that the company had got over its crisis.⁸⁴

In spite of the fact that Star Paper Mills Ltd. produced little more than losses and that it was a heavy liability to the parent company, its activities brought some advantages. Cellulose and pulp consignments which would otherwise have been difficult to sell had been despatched to the English mills; between 1931 and 1938 the total amount exported from Finland to the Star mills was 113,000 tons of cellulose and 100,000 tons of pulp.⁸⁵ These consignments helped to keep Kymmene's cellulose and pulp mills going at greater capacity and thus reduce their costs.

4. The period of the Second World War

During the Second World War, Star had to function under largely new management. In the autumn of 1939 the board appointed as managing director Mr. Stanley Perkin, who succeeded Henry Bradly, who had died in 1938.⁸⁶ Perkin had great experience, above all in paper selling; he had been appointed sales manager for Messrs. Albert E. Reed & Co. in 1929

and in 1930 he was appointed manager of London Paper Mill. At Star Perkin also became Vice-Chairman of the company, the other members of the board at the beginning of 1940 being Th. Wiklund, Erik Palmgren, J. S. Rixson, and W. B. Vincent. Wiklund had seldom attended board meetings, even before the war, but the war made this completely impossible for him.⁸⁷ When the political situation changed in September 1941 Wiklund and Palmgren resigned from the board; in Wiklund's case, this was a mere formality, but not so for Palmgren, who had to leave for Finland. Stanley Perkin was elected the new Chairman of the board. The company also acquired a new secretary, for in 1939 Mr. Henry Malley, who had served the company for 53 years, died.⁸⁸ Mr. E. E. Griffiths, who had been responsible for various administrative duties in the company since 1931, was chosen as the new secretary in December 1939.⁸⁸

One consequence of the war was that Kymmene lost contact with Star to a great extent. Kymmene's head office still received some of the minutes of the Star board in 1940, but after that, information on what was happening at Star became scant, and towards the end of 1941 it practically petered out. Information did, however, still get through on occasion; for example, when Kymmene's directors visited Stockholm, they were able to contact Star from there. At Kuusankoski, estimates based on incomplete information were made concerning Star's balance sheets for Kymmene's book-keeping under the heading: 'Star's balance sheet would presumably look approximately as follows'.⁸⁹

Before the war, Star's close connection with Kymmene also resulted in both mills obtaining most of the pulp they used from Kymmene. In 1935—1938 the Star mills bought from Kymmene each year about 16,000 tons of mechanical pulp, about 16,000 tons of chemical sulphite pulp and in addition about 1,000 tons of chemical sulphate pulp.⁹⁰ At the beginning of the war, imports of pulp from Finland ceased, and the mills started using pulp bought from the United States and Canada and delivered by half a dozen American firms. Since the mills' paper production was small during the war, the amount of pulp used was barely a third of what it had been in peacetime; furthermore, waste paper was used a lot in the manufacture of paper.⁹¹

During the Second World War the paper production of the Star mills was as follows:

year	Star	Barnsley tons
1939	27,993	14,594
1940	18,749	11,650
1941	9,967	9,206
1942	5,034	6,467
1943	6,300	3,180
1944	8,850	4,593
1945	10,004	6,559

These figures show that the production of paper had decreased from the beginning of the war and reached a low during 1943 when the combined production of both mills was about 9,500 tons, after which production figures started to rise slowly.

The outbreak of war in the autumn of 1939 influenced paper sales for a moment in such a way that customers and buyers tried to order large quantities of paper. However, the policy of the company was very cautious: only business from regular customers was accepted. This was due to two reasons — firstly, pulp stocks at Blackburn as well as at Barnsley were very limited; secondly, there was price control on paper. At the beginning of September 1939 regulations concerning the maximum permissible prices for paper were published for the first time.⁹² In the view of the Star managers, the regulations did not particularly take into consideration the increased production costs, and as a result some of the paper was produced at a loss. In October 1939 it was decreed that the pulp held in stock by the paper mills was to be held at the disposal of the Ministry of Supply. Stocks of pulp as well as imported pulp had to be sold to the Ministry, which sold it to the mills. In this way the Ministry of Supply was able to keep itself informed as to the use of raw material and also the production of paper.⁹³

At the beginning of 1940 the Ministry of Supply started regulating the use of paper. During the whole wartime thereafter deliveries of paper were subject to licence and later this was coupled, with the licensing of pulp and waste paper consumption on the basis of quotas, which were calculated as percentages of actual production in the

twelve months ended 31st August, 1939, and varied according to the quality of paper. The price of paper, also, was controlled the whole time and as raw material was often second grade, that, too, limited the mills' production to a great extent.

It was possible to maintain fairly satisfactory usage of the machines at both mills until the beginning of 1940, thanks largely to Government orders which were not bound by the regulations; after that, however, the difficulties started. Good quality waste paper had been used up, as had stocks of refuse pulp left over from before the war. Coal stocks were also decreasing and the first problems concerning transport were beginning to appear. Finally, the mills were threatened with the possibility of having to close down completely. In 1940 the Board of Trade formulated plans for the concentration of industry, so that labour and storage space might be freed for more essential purposes.⁹⁴ In due time, the paper industry came up for consideration and in July 1941 Star received a letter from the Paper Controller in which it was stated that the Board of Trade considered that the Barnsley mill should be closed down and its production transferred to Star's mill as far as possible. The board made a counter-proposal, according to which the Barnsley mill would continue in operation at the highest feasible rate of production, taking over from Star most or all of the quotas in qualities common to both mills and that the Star mill would close all machines except one unit, which would make impregnated kraft for military purposes, coated papers, imitation parchment and newsprint. This submission was accepted and in September 1941 all machines at Star except No. 1 were closed down and a large number of employees released for work in munition factories or other armament production.⁹⁵

With the gradual disappearance of salvage stocks and progressive reductions in quotas, the company continued its policy of maintaining the highest possible rate of production at Barnsley. In 1942, production had to be limited in such a way that the Star mill functioned for 80 hours per week and the Barnsley mill with two machines (Nos. 2 and 5) for 120 hours per week.⁹⁶ At the end of 1942 it became clear that there was reason to determine whether the companies' total quota tonnage would necessitate either a further reduction in the rate of operation or the concentration of production at one mill. A detailed investigation was put in hand with a view to deciding whether both mills should continue in operation or which mill should, in the best interests of the company, be closed down. The closing down of the mills, however, was considered an extreme measure, because that would have meant losses with regard to

peace-time conditions: loss of buyers, transfers of labour, and possibly a decrease in the quality of paper. At this stage, the decision was taken to stop yet another machine at Barnsley, leaving only one (No. 2) in operation. This machine mainly produced MG papers.⁹⁷ The Star mill continued producing one type of coated paper (Lightstar) and impregnated papers, as well as some other qualities. Production continued on this basis until the end of the war.

The paper controls that had come into force during the war continued until 1951.⁹⁸ This shows how the United Kingdom paper industry still continued to function under exceptional circumstances with rationing. Contrary to expectations, rationing was not eased gradually, but sometimes it eased up and then it tightened up again. In 1945 and 1946 paper manufacture was permitted to increase, but in 1947 quantities of raw material and production quotas were again drastically reduced.⁹⁹ During the war people had an understanding attitude towards paper controls, but after the war discontent began to appear. Difficulties were caused for the mills by the price of paper, which was allowed to rise at a slower rate than the cost of production, and especially of labour.

In the years immediately after the Second World War, the paper production of the Star mills was just over half of what it had been before the war. What enabled the company to get as big a quota as this was the fact that from 1948 onwards the Blackburn mill produced coated paper for export to the hard currency area. Another reason for Star's exceptionally large quota was the fact that Kymmene contracted to deliver 500 tons of bleached sulphite pulp each month to Star, who were able to retain 300 tons for their own use, the rest going to the Paper Control.¹⁰⁰ The possibilities for production improved enough for new machines to be started up. In the spring of 1946 a second machine was started up at Blackburn and in the summer of 1946 Barnsley periodically had two machines working. However, the decade was almost at an end before there was any need to consider the possibility of the mills working to capacity. By then, production plans had changed and with them the use the mill was put to.¹⁰¹

Star, in common with several United Kingdom paper mills, experienced a number of difficulties in the years following the Second World War. Paper Control continued, but that alone could not be blamed for the shortage of pulp, since there was a general shortage of pulp on the world market at that time, and it was occasionally difficult to obtain. The quality

of coal was poor, and the Blackburn mill in particular suffered from a shortage of labour, which was a common phenomenon in this part of the country. Especially after the raising of the school-leaving age, the sorting department was short of female labour. At times the shortage was so acute that the largest two machines at Blackburn could not be used simultaneously. In order to try and improve the situation in one way or another, Star suggested that the government subsidise housebuilding in the area.¹⁰²

The continuation of wartime economic conditions meant that the paper industry did not return to normality until the beginning of the 1950s. However, in the midst of its difficulties, Star attained success in one field: considerable amounts of paper were sold for export for the first time since the beginning of the 1920s. These exports commenced in 1947 and in the next year they increased to 3000 tons. This was a question of coated paper only, which obtained a foothold principally in South America and Central Europe. At the end of the decade, the most important export country was Argentina, with Switzerland in second position.

Financial result

The following figures show Star's financial results in the exceptional years 1939—1949:

year	profit £	year	profit £
1939	31,438	1945	43,226
1940	31,415	1946	41,255
1941	25,187	1947	17,173
1942	21,166	1948	24,258
1943	23,417		loss
1944	67,459		£
		1949	51,552

The noteworthy thing about these results is that during the war the company's profits were relatively high and that the financial result was better than it had been at the end of the 1930s. In addition, it can be noticed that profits remained high in spite of the small amount of paper

being produced. One can say that the very fact that there were profits was due to the absence of normal business factors. Rationing led to stability in the sales and the price of paper; there were hardly any risks involved in production. Overhead costs were also covered within the framework of paper price control, and there were hardly any costs involved in the storing of paper. Furthermore, the company could sell old stocks of paper at an advantageous price during the war years. In addition, the mill had an extra income from rent on buildings used for military purposes.

At the end of 1939 Star was valued at £727,000, whereas the valuation at the end of 1945 was £820,000, but this included Government War Bonds to the value of £275,000. At the end of 1939 the combined book value of the two mills was £400,000, the corresponding sum being £260,000 in 1945, which meant that when the war ended the company's property consisted more of Government War Bonds than of mills. The explanation of this peculiar-looking situation was that during the war investments in the mills were very small, but on the other hand depreciation was allowed for in full and good annual results let the company make further, additional allowances for depreciation. At the end of 1945 the book-keeping value of the Blackburn mill was clearly lower than it had been 15 years previously, whereas the Barnsley mill was at a higher value than its purchase price because of the large investments made there during the 1930s.

The company distributed 4 % dividend on the 1939 and 1940 results; a 3 % dividend was paid on the 1941 result and in 1942—1944 there was a dividend of £4. 3. 4. per cent. The 1946—1948 results permitted a 6 % dividend. In 1949 all the above-mentioned difficulties of the paper industry were to be seen in a very pronounced form and if this year — a year of losses — is left out of account, the rise in dividends clearly shows that Star's position was improving.

Before the war the stock exchange price of Star shares was around 5d., that is, more than 50 % below par. In the years 1941—1942 the price rose and was at about par in 1942. In 1948 the shares were quoted at 2s.6d. which means that they were clearly above par.

III Star in the Fifties

1. Management

Around the end of the Second World War there were changes in the management personnel of Star. Stanley Perkin, Chairman of the Board and Managing Director, died; tragically, he suffered a stroke on the evening before he was due to leave for the United States where he was to have talks about altering one of Star's machines for the production of coated paper.¹ In the autumn of 1947 Edward Reeve Angel was elected Chairman of the Board and Managing Director, and thus began his second term as Star's director for, as has already been mentioned, he was Managing Director of the company from 1930 to 1934.² Reeve Angel had maintained close contact with the mill even during those years when he was not on the Board, as he was the principal agent for the mill. Thus, on becoming the new Managing Director, he already knew the company and its mills thoroughly. In addition to this, the Reeve Angel firm also had financial interests in Star.

Among the directors who had seen long service with the company Thos. Holt and E. Bonner, on approaching retirement age, resigned from the Board at the beginning of the 1950s and new directors were introduced by Reeve Angel. In 1947 David Grand Petrie, an engineer and during the war a director in the division of production services at the Ministry of Supply. In 1947 the company secretary, Edward Eric Griffiths, became a member of the Board, remaining until his death in 1952. The ending of hostilities meant that Karl-Erik Ekholm, Managing Director and Chairman of the Board of Kymmene since 1937, became a member of Star's board in 1948.³ In 1952 another member of Kymmene's Board, Carl Johan Ehrnrooth became a member of Star's Board too.

In 1930 Kymmene owned 56 % of Star's share capital; as a consequence of the reorganisation of the share capital Kymmene's holding increased to almost 80 % by the beginning of the 1950s and to nearly 90 % by the mid-1960s. In some cases, admittedly few, Kymmene also bought new issues of shares, but not very willingly because from Kymmene's point of view it was unnecessary to commit capital to Star in this form. Kymmene's majority shareholding gave it the right to select members of the board but, in contrast to the pre-war period, the management of the mills after the Second World War was almost entirely in the hands of Englishmen. Ekholm's policy in particular was to prevent the fusing of Star's affairs with those of the Finnish company and to keep the enterprise British. In the matter of selection of members of the board the practice that had been observed by Kymmene itself already in the 1930s was followed: in the appointment of members, the number of shares they owned was of secondary importance; instead, an attempt was made to appoint experts who were important from the point of view of the mill's functioning. Some of the directors were company officials and some came from outside.

In 1946 Ekholm made his first post-war visit to Blackburn and Barnsley. In the same year Reeve Angel visited Kuusankoski. After this, the Kymmene directors visited the Star mills a few times each year and the Star directors started making visits to Kuusankoski, which they had not done before the war.

2. Technical and commercial matters

While the Second World War was still in progress, the Star management pondered problems that the post-war era would bring. At the beginning of 1945, when there was no longer any doubt about the final outcome of the war, adjusting to new marketing situations took on increasing importance. Later, however, it became apparent that, at least as far as the United Kingdom home market was concerned, there was no particular urgency because of the continuation of rationing; but from the point of view of the company itself, there were reasons that made planning for the future imperative.

After the war one had to start from the situation with which the mills were faced in 1939, before the war: the mills had only just become

profitable, but it was not certain that they would continue to function successfully unless their production policy was managed according to a plan. According to the plans of the previous managing director, Bradly, newsprint as well as other lower grade papers had to be replaced at the Blackburn mill by the production of high grade quality papers. Star's No. 1 machine was rebuilt to manufacture machine-coated papers using the Massey process. This signalled the practical application of a new production policy. During the war the Star management considered that their main objective was to continue the production of coated papers without interruption and to keep the mill's reputation in this field alive, which showed that they intended to continue this kind of production after the war.

In estimates made around 1945—1946 the Star management considered the marketing of coated paper very promising, with regard to both home and export markets. They therefore tried to increase the mill's coated paper capacity with a corresponding reduction in the production of cheaper qualities.⁴ The choice of this production trend may very well be regarded as a strategic decision, which meant that a once important newsprint mill had to be converted for another and technically much more demanding branch of paper manufacture. When starting to carry out this policy, the Star management themselves were unaware of the magnitude of the task they had undertaken; it was not just a question of converting machines, for in almost every respect the newsprint manufacturing mill was unsuited, if not completely unsuitable, for the production of coated paper. The development of the Blackburn mill as a coated paper producer also meant for Star that improvements and investments were concentrated on Blackburn; nothing so radical occurred in the production trend of the Barnsley mill and for this reason much less capital was set aside for the development of the Barnsley mill than for the Blackburn mill.

In accordance with the policy it had adopted, the Star board took a decision in February 1946 to carry out changes in the No. 2 machine, built by Walmsley in 1906, to enable it to produce machine coated paper.⁵ The most important parts had to be imported from the United States and Canada and an import licence was obtained for them by showing that the paper would mainly go for export. A Massey coater, a new intercalender, two Hamlet cutters, and a Voith broke plant were added to the rebuilt machine, which had an annual capacity of approximately 20,000

tons. Towards the end of 1949, after several delays, the machine started producing coated paper, but because of technical difficulties concerning the whole mill and especially because of the limited product range it was a further two years before the machine could be used for a satisfactorily large production run. In addition, the coating plant was completed just when a slump in the paper market was commencing, so that there were few orders. In any case, the Blackburn mill now had at its disposal two machines capable of producing coated paper, with a theoretical capacity of 30,000—35,000 tons per year. The main reason why not all this capacity could be utilised was that the marketing area within the United Kingdom was limited until the year 1958 under the licensing agreement in force; nor could as much paper be placed on the export market as the mill could have produced. These factors for a long time prevented the machines from being used to their maximum effect, as did also the limitations of the pulp preparing plant and the finishing space as well as the extensive reconstruction work. It was only in 1955, after the mill's pulp preparing plant had been enlarged sufficiently, that it was possible to use both the large machines simultaneously for the production of coated paper.⁶ Again, at the drying end, the cutters were completely renewed and in 1955 a new supercalender was installed. The mill's sorting plant and dispatch department were completely rebuilt and the packaging department was equipped with machines, which, previously, had been a rarity in that department. The department for processing waste paper was rebuilt and the mill's electrical system was almost completely renewed at the same time as electrical drive replaced the mechanical drive which the mill had employed until then; the mill's large steam engine was scrapped and power was purchased from the outside supplier, the British Electricity Authority. In 1954 the boilers were converted from coal to oil. The mill also started consciously to develop the quality of coated paper and for this reason research and quality control received attention in quite a different way from what had been necessary when newsprint was being produced.⁷

In addition to the two large machines, the Blackburn mill also had the old No. 4 machine, the annual capacity of which was about 3,000 tons. When one includes the production of this machine, the mill's total capacity was 40,000 tons per year. In the mid-1950s the actual quantity produced was just under 20,000 tons, or half the theoretical production capacity of

the machines. When divided into main groups, the paper qualities produced in the mid-1950s were as follows:⁸

coated papers (Lithostar, Diamondstar, Goldstar, Digeststar, Bronzestar)	75 %
mechanical printings	15 %
others (esp. antique book printings)	10 %

The production of newsprint ended with the war. For a few years after the war imitation parchment was produced, but its production was stopped at the beginning of the 1950s. That part of the mill's equipment which could not be used for manufacturing coated paper was given over to mechanical printings, mainly for the big London publishing houses.⁹ On the other hand, the production of mechanical printing papers was, in the view of the Star management, a temporary solution, which they wanted to phase out as soon as the Blackburn mill's capacity could be used for the production of higher grade paper qualities to as large an extent as possible. A clear trend towards specialisation can be seen in this; Star was prepared to give up part of its production to mills that were better suited for the purpose and it desired to specialise in finer paper qualities, especially at the Blackburn mill.

At the beginning of the 1960s the Blackburn mill's production rose to about 30,000 tons and at the end of the decade to about 40,000 tons. Already at the beginning of the 1960s practically all the paper produced at the Blackburn mill was coated paper. The increase in production was influenced above all by the fact that in 1958 the area restrictions on sales of paper manufactured under the Massey patent were lifted.

The production figures for the 1960s also include the production figures of the Astralux department. The commencement of the production of Astralux in about 1960 signified for the Blackburn mill a completely new departure. Astralux is the name given to Star's cast coated papers and boards which are characterised by an exceptionally smooth and high gloss finish. Its origin goes back to 1954 when Reeve Angel, during his visit to the United States, became acquainted with the method at the S.D. Warren Company's mill. On returning from his trip, Reeve Angel reported on the matter to the Kymmene management, who were extremely interested in

it.¹⁰ In 1955 Star signed nonexclusive licenses for the process which allowed them to manufacture the material in England, Wales, and Finland. When financing had been arranged the company ordered the requisite machines for the process in the spring of 1957.¹¹

Before the Second World War the Barnsley mill had four paper machines, only three of which were in operation after the war. In 1953 the No. 4 machine was sold, which left the mill with machines 1, 2, and 5, later renumbered 11, 12 and 15. The No. 1 and No. 5 machines were MG (or Yankee) machines and machine No. 2 was a fourdriner. Before the war Barnsley's production was geared to the manufacture of relatively high grade note and printing paper. This choice had proved right and against this background there was no reason after the war to change the production trend; instead, an attempt was made to improve the quality of the products and at the same time the mill's profitability. The papers produced at Barnsley were not cheap, but the intention was to produce high quality paper at a reasonable price.

One of the most important changes in the paper machines was the rebuilding of the fourdriner machine in the 1960s. It got a new Valmet pressure headbox, a new Black Clawson wet end, a completely new drive and control of operational factors such as pressures and vacuums. A size press was added to the machine, which at that time was one of the very few size presses running in the United Kingdom. New cylinders were also installed and a number of other improvements were made to the machine, after which it became one of the fastest fine paper machines in the whole United Kingdom. The MG machine, No. 15, had a new cylinder installed. After these improvements, the two Barnsley machines' production capacity increased by 50 % and at the same time production quality improved.

A change affecting the whole Barnsley mill was the rebuilding of the pulp preparing plant; the mill's power system was also changed, partly in the same way as at Blackburn: electricity was bought in from outside, the mill ceased generating its own electricity, and steam was used for drying paper, heating the mill, and running the few remaining steam engines. The finishing department was completely reorganised: the old machines were scrapped and in their place there were new cutters, rollers, presses, and the ream packing method was also introduced. The mill's big steam engine was scrapped. In addition to these visible improvements, continual routine changes were made.¹²

Unlike the Blackburn mill, the Barnsley mill nearly reached its pre-war production amounts at the beginning of the 1950s; in 1950—1955 paper production at Barnsley was 11,000 tons per year. At this time the distribution of the various paper qualities produced was as follows:¹³

M. G. papers (poster, liner, miscellaneous)	47 %
pure printings	11 %
pure bank	11 %
premium bond	8 %
super offset	5 %
others	18 %
	<hr/>
	(100 %)

Thus, in the mid-1950s almost half of the mill's output was produced by two Yankee machines; thereafter, the proportion of M. G. papers began to decline.

At about the same time that Edward Reeve Angel became Star's managing director the company's sales organisation was also revised. Old agency contracts were left unrenewed and in 1948 a special sales company 40 % of its share capital and H. Reeve Angel Co. Ltd. 60 %. According to the original agreement this distribution of the share capital was to be in force for 12 years, after which H. Reeve Angel would offer the shares for sale to the paper producer.¹⁴

3. The Paper Markets and the Company's Financial Result

In the following table the company's profits for the years 1950—1960 are given:

year	result £
1950	208,523
1951	468,316
1952	— 84,825
1953	140,167
1954	369,185
1955	649,542
1956	334,816
1957	275,679
1958	278,684
1959	212,475
1960	254,564

The general picture obtained of Star's profitability during this 20-year period is completely different from that of the 20-year period before the war. In the 1950s Star made a loss in only one year, and even then the loss was contained within quite reasonable limits.

The 1949 depression was overcome in the paper markets in 1950 when demand exceeded supply and the paper industry advanced with the restored freedom to a situation where it could determine its own selling price. The Korea crisis in 1951 ensured a continued boom in the paper market and the price of paper rose sharply. The Blackburn mill obtained a good price for its products, especially in the export markets; the company's profits rose by £260,000 over the previous year's figure, which was a large sum. On the other hand, however, Star's management knew very well that this was a case of a windfall profit which was largely due to the fact that the price relationship between the raw material bought earlier and the paper produced was very advantageous. In 1951 the margin between production costs and sales price was about £50 per ton at both mills. But production costs were the whole time closing on the sales price. The boom in the paper markets lasted until the beginning of 1952, but in the early spring of that year a slump set in, continuing throughout 1952 and lasting until early 1953. In 1952 Star's loss was £84,000, caused in part by unprofitable

production at Blackburn but mainly by a change in the value of stocks, as the price of pulp sank sharply. In addition, it was difficult to sell paper, even at a reduced price, as the mills' production figures show. At the turn of the year 1952—1953 the mills were working short weeks but, according to the estimates of the Star management, they survived the year better than British mills in general.

In 1953 the price of paper fell further, but this time the mills had time to arrange their production costs to correspond to the changed price. The fall in the price of paper was also reflected in the price of raw materials. In 1952 chemical pulp at the Blackburn mill cost £52 per ton of paper, whereas in 1953 the corresponding price was £24; the cost of all raw materials fell by nearly 50 %. At the end of 1953 the trend in the paper market was again upward and during the following four years paper markets in general were quite stable and both Star mills were running at the limits of their operational capacity; the mills had a very satisfactory margin on their paper. During these years the mills' net profits were also quite good and, in consequence of the years of reasonably successful operations, the company's share capital was increased in the spring of 1955 from £450,000 to £900,000 by using reserve funds and by a one-for-one scrip issue. At the same time, the company's issued capital was brought into closer relation to the capital actually employed in the business.¹⁵ In spite of using reserve funds to increase the share capital, at the end of 1955 the reserve funds were still quite large — as large as the share capital.

Around 1956 increases in the price of paper came to an end and there was even a partial downturn. There was in fact a slump in the United Kingdom paper market in 1956, but this had little effect on the paper qualities produced by the Star mills. In the latter half of the 1950s, however, paper markets were unstable. This was partly due to the fact that some of the larger companies' new projects were ready and therefore much of the increased capacity in the paper industry was available for production. The profit margin on paper stayed quite good, however, because production costs fell and the mills were able to use 70—80 % of their capacity. In the late 1950s the company's profits were again quite high and for this reason the share capital could once more be increased in 1958 from £900,000 to £1,350,000 by using reserve funds and by a scrip issue of one-for-two. In spite of this new share issue, the company's reserve funds were almost as large as the share capital at the end of the

decade. During these years the company's liquidity position was excellent and in the years 1953—1958 quite large investments — on an average, £240,000 per year — could be made from the company's own reserves without having to resort to bank loans to any extent. On the basis of the good financial result Star and Kymmene also had discussions during this decade concerning the possibilities for expanding their operations by establishing themselves on the other side of the ocean; this they would do by buying a suitable mill for their purpose in North America. Some mills were actually mentioned and there were initial talks, but in the end the view prevailed that the company had sufficient to occupy itself with in the United Kingdom, a typical decision of the cautious investment policy of the Ekholm period. On the other hand, Kymmene received serious offers for the sale of its shareholding in Star, but now Kymmene was not interested in such offers.¹⁶

A Hundred Years of Star Paper

The history of the present Star Paper has several starting points, and furthermore both the Blackburn and the Barnsley mills have their separate histories up to the year 1930. The general picture of the various stages in the more recent history of these mills has been largely coloured by Kymmene's operations in the United Kingdom market.

Although the Blackburn and the Barnsley mills belonged to different owners up to the year 1930, their histories still share some common features; both mills — but in particular Star — were very satisfactory or really good and stable economic enterprises until the beginning of the 1920s, when their difficulties started, and the further we progress into the 1920s the clearer it becomes that neither mill had the resources to stay in the race, for they lacked both finances and will. Following the war, international competition in paper markets became severe in the 1920s and demanded management that was prepared to operate according to the changed circumstances. The difficulties encountered in this decade by Star and Yorkshire were by no means unique; in many countries small and medium-sized paper mills faced difficulties and were obliged to ask their governments for protective tariffs, or they shut their doors, or they entrusted themselves to larger enterprises. The pressing need to

rationalise production by changing over to larger production units, special qualities, and active marketing demanded special resources which many enterprises did not have. For the first time in its history the wood-based paper industry became partially outdated.

At the beginning of the 1920s the Kymmene Company acted as a lifeboat to many small pulp and paper mills in Finland and linked them to itself. The buying of shares in Star was the company's first foreign investment and at the same time the Finnish paper industry's first venture abroad. The expansion of operations to foreign countries was more a result of estimates concerning foreign trade policies than of investment calculations in the ordinary sense. About five years after Kymmene associated itself with Star it became obvious that the estimates made at the time of the purchase had in the main been incorrect; trade policies did not develop in the way that had been forecast and the production of newsprint, intended as the principal article to be manufactured by the mills, was always unprofitable. Efforts to establish production on a profitable basis led the company to focus on new paper qualities towards the end of the 1930s: coated paper at the Blackburn mill and high grade note and printing paper at Barnsley. For Kymmene this was a significant move, for at the same time the company became interested in the production of coated paper, later to become one of its most important operations.

From the point of view of the Blackburn and Barnsley mills it can be said that co-operation with Kymmene and placing themselves in Kymmene's hands obviously saved the mills. In any case, as part of Kymmene they participated in an enterprise whose operations stretched from the large reserves of standing timber in the Nordic countries to a world-wide marketing organisation.

From Kymmene's point of view, the British mills brought heavy losses, as has already been observed, but they were important as purchasers of the parent company's raw material. As far as both Kymmene and Star are concerned, there is reason to touch on one more question: the exchange of technical and trade know-how was of mutual importance; in the 1930s Star got most of its technical know-how from Kuusankoski, but gradually the contacts which Star had with North America became significant to the parent company. In addition, the parent company found it useful to consider the British subsidiary as a bridgehead in the world of paper markets.

Notes

I Star before the first World War, pp. 9—29

- 1 Coleman, *The British Paper Industry 1495—1860*, pp. 217—226; Shorter, *Paper Making in the British Isles. An Historical and Geographical Study*, pp. 142—150.
- 2 Miller, *Blackburn: The Evolution of a Cotton Town*, pp. 321—326.
- 3 Information provided by I. Rossalin (Brlnscall).
- 4 Registrar of Companies and the Public Record Office (Ashridge Depository) *Dissolved Companies 7690/1901*; Registrar of Companies 17419; County of Lancashire Record Office, Preston. John Mitchell collection Ref. DDX/54/96 (henceforward abbreviated to John Mitchell collection); *Blackburn Weekly Telegraph*, 17th November, 1906.
- 5 Registrar of Companies and the Public Record Office (Ashridge Depository) (henceforward abbreviated to *Dissolved Companies*), *Dissolved Companies 8643/2006*; John Mitchell collection.
- 6 *Dissolved Companies 8172/1948*.
- 7 Shorter, pp. 144—150.
- 8 *Dissolved Companies 9335/14527*.
- 9 A list of shareholders is included in the *Dissolved Companies* collection 9335/14527.
- 10 Jeremy Hunt's *Recollections of Old Darwen Families*, pp. 18—19, 50—53, 140—141; Mannex, *Directory of Preston, Blackburn etc.*, p. 528; *Blackburn Weekly Telegraph*, 17th November 1906.
- 11 Mannex, p. 505.
- 12 Star's library. 'Paper related to Star's history'.
- 13 *Papermakers' Directory and Diary 1876*, pp. 26—27.
- 14 Star's library. Inventory of the mill's machinery (1881); material concerning paper manufacture and mill machinery also appears in 'Lancashire, The Premier County of the Kingdom', pp. 144—145. As this work was written in 1890, the information it gives is not completely relevant for the mill in the early 1880s.
- 15 General Meeting of shareholders, 25th November, 1876.
- 16 General Meeting of shareholders, 23rd June, 1877.
- 17 General Meeting of shareholders, 14th June, 1881.
- 18 General Meeting of shareholders, 6th April, 1878.
- 19 John Mitchell collection.
- 20 John Mitchell collection.
- 21 Board members are mentioned in the minutes and their election in the half-yearly meetings of shareholders.
- 22 Meeting of shareholders, 20th May, 1887; Meeting of Directors, 25th May 1887.
- 23 As mentioned in the register of shares. Only ordinary shares are referred to.
- 24 Meeting of Directors, 30th May, 1888; Meeting of shareholders, 8th June, 1888.
- 25 Meeting of Directors 20th April, 1887; Meeting of shareholders, 29th April, 1887.
- 26 Meeting of shareholders, 21st May, 1897; Correspondence (1893—1914) Star to Rixson, 4th April, 1897.
- 27 Meeting of Directors, 9th August, 1909.
- 28 Meeting of shareholders, 8th February, 1898.
- 29 Meeting of shareholders, 19th November, 1886.
- 30 Meeting of shareholders, 20th April, 1887.

- 31 Meeting of shareholders, 20th May, 1887. The machine is referred to in 'Lancashire, The Premier County etc.', p. 144.
- 32 Meeting of Directors, 14th January, 1891 and 25th March, 1891. Meeting of shareholders, 19th May, 1893; 'The Darwen News', 22nd April, 1893; 'Paper Making', 1st December, 1893 pp. 365—369.
- 33 Meeting of Directors, 14th December, 1892.
- 34 Meeting of Directors, 28th September, 1896; Meeting of shareholders, 20th November, 1896.
- 35 Correspondence (1893—1914) Star to different machine tool manufacturers, September, 1896; Meeting of Directors, 12th October, 1896.
- 36 Meeting of Directors, 21st June, 1897.
- 37 Meeting of Directors, 14th June, 1897, 2nd August, 1897, 6th September, 1897.
- 38 Meeting of Directors, 17th May, 1899.
- 39 Meeting of Directors, 16th November, 1903.
- 40 Meeting of Directors, 25th April, 1904; Meeting of shareholders, 17th November, 1903.
- 41 Phillips, A Visit, p. 20.
- 42 Correspondence (1893—1914) Star to Walmsley, 11th September, 1905.
- 43 Phillips, A visit, p. 27; routine improvements are continually mentioned in the minutes of the board.
- 44 Meeting of Directors, 25th June, 1900 relating to The Anglo-Canadian Produce Co.; Correspondence (1893—1914) with the Anglo-Canadian Produce Company, 25th June, 1900, and with Mr. C. D'Oyley Mears 22nd June, 1907.
- 45 According to the weekly report.
- 46 According to the weekly report.
- 47 Pulp vendors are mentioned in the invoices approved by the board, e.g. Finnish pulp: Correspondence (1893—1914), Star to different agents, 27th October, 1905.
- 48 Correspondence (1893—1913) between newspapers in the towns mentioned above and the company referred to.
- 49 Ibid, correspondence with The Wall Paper Manufacture Co
- 50 Meeting of shareholders, 15th July, 1887.
- 51 This, and related information — as follows — originates from the Dissolved Companies 9335/14527.
- 52 Meeting of Directors, 13th May, 1891; Meeting of shareholders, 29th May, 1891.
- 53 Meeting of Directors, 23rd May, 1887.
- 54 'Papers related to Star's History'.
- 55 Meeting of Directors, 13th March, 1891.
- 56 The General Meeting determined the size of the dividend. Daily Despatch, 16th November, 1909.
- 57 Meeting of shareholders, 12th November, 1918.
- 58 Meeting of shareholders, 22nd October, 1918, and 12th November, 1918.
- 59 Meeting of Directors, 14th October, 1918.
- 60 According to the lists of the Manchester Stock Exchange.
- 61 Meeting of Directors, 9th February, 1920 and 16th February, 1920.
- 62 Meeting of Directors, 9th February, 1920.
- 63 Meeting of Directors, 8th March, 1920.
- 64 Meeting of shareholders, 15th May, 1920.

II Star in the inter-war period and in the 1940s, pp. 30—79

- 1 The Central Archives of Kymmene Co. (Kuusankoski) (Kymin Osakeyhtiön keskusarkisto, Kuusankoski — hereafter abbreviated to KYA). H. Reeve Angel's letter to Einar Ahlman, dated 8th August, 1930, which includes a list of the main shareholders. Also, Star, Register of Shareholders 1920—1926.
- 2 Meeting of Directors, 31st May, 1920.
- 3 Meeting of Directors, 31st May, 1920, 12th September, 1928, 7th November, 1928.
- 4 For example, The World's Paper Trade Review (hereafter abbreviated to WPTR), 9th July, 1920, p. 120; 16th July, 1920, p. 224; Paper, 16th January, 1920, p. 174; 28th January, 1928, p. 42.
- 5 Separate mention of production made in the 1921 general meeting.
- 6 Soule, Prosperity Decade, p. 98; Pollard, The Development of the British Economy, p. 215.
- 7 WPTR, 1st October, 1920, p. 1197; 8th October, 1920, pp. 1293—1294.
- 8 Meeting of Directors, 16th March, 1921.

- 9 Star share prices are taken from announcements in WPTR.
- 10 Information on the capacity of newsprint machines abounds in the trade journals. See also Ahvenainen. Från pappersbruk till storföretag. Kymmene Aktiebolag 1918—1939, pp. 118—119.
- 11 Prices are based on information obtained from the British trade journals. See too Ahvenainen, The Competitive Position of the Finnish Paper Industry in the Inter-War Years, pp. 4—5.
- 12 Meeting of Directors, 19th March, 1924 and 9th July, 1924.
- 13 This information was included in a report on Star's situation prepared for the Midland Bank by the London firm of consultants, Whinney, Smith & Whinney.
- 14 Meeting of Directors, 9th January, 1929, 24th April, 1929, 12th June, 1929.
- 15 Meeting of Directors, 21st December, 1927 — 4th January, 1928.
- 16 Meeting of Directors, 10th November, 1926.
- 17 Annual Report, 1928.
- 18 KYA Reeve Angel's letter to Ahlman, dated 8th August, 1930.
- 19 KYA Bonsdorff's memorandum, 3rd November, 1930.
- 20 Meeting of Directors, 13th April, 1929.
- 21 Meeting of Directors, 24th December, 1928, 2nd January, 1929, 30th January, 1929, 2nd February, 1929, 2nd March, 1929.
- 22 'Cost of Production'. Weekly reports, June-July, 1930.
- 23 KYA. Papers concerning the purchase of Star. An account dated 10th July, 1930.
- 24 Meeting of Directors, 26th July, 1930.
- 25 Meeting of Directors, 30th July, 1930.
- 26 According to official Finnish foreign trade statistics.
- 27 See, for example, WPTR 1921 June 24, p. 2235 'Foreign Competition'.
- 28 Archives of the Finnish Foreign Ministry; Trade Policy section 56 D, based on reports prepared by the London Embassy.
- 30 TICON Archives. Stockholm, Jahn's memorandum of 28th October, 1928.
- 31 Ahvenainen, Kymmene Aktiebolag, pp. 173—176 & 193—195, together with the references given there.
- 302 Ahvenainen, Kymmene Aktiebolag, pp. 129—137.
- 32 KYA Copies of telegrams. Polin's cables to Ahlman in May 1930.
- 33 KYA Papers concerning the purchase of Star and Barnsley. Ahlman to H. Reeve Angel, 11th August, 1932.
- 34 KYA Papers concerning the purchase of Star and Barnsley. Two undated memoranda: 'A Survey of Newsprint Conditions in the U. K.' and 'Estimated Production of British Newsprint Mills'.
- 35 Meeting of Directors, 7th August, 1930; KYA Papers concerning the purchase of Star and Barnsley. H. Reeve Angel to Ahlman, 8th August, 1930.
- 36 KYA Backman's report of his journey in the collection 'Föredragningslistor jämte bilagor' dated 1st June, 1927.
- 37 Meeting of Directors, 13th August, 1930.
- 38 KYA Statutory company meeting of 25th April, 1929.
- 39 Undated letter sent by H. Reeve Angel to Ahlman in August 1930.
- 40 KYA Board, 6th November, 1930; also Papers concerning the purchase of Star and Barnsley. Bonsdorff's memorandum, 3rd November, 1930.
- 41 KYA Papers concerning the purchase of Star and Barnsley. Durchman's memorandum, 2nd October, 1930.
- 42 KYA Board, 6th November, 1930; Papers concerning the purchase of Star and Barnsley, Reeve Angel's letter to Ahlman, 24. 10. 1930; Star archives. Meeting of Directors, 20th October, 1930.
- 43 Unofficial meeting of shareholders, 29th October, 1930.
- 44 Reference to this telephone conversation is made in Reeve Angel's letter to Ahlman of 31st October, 1930.
- 45 KYA Board 6th November, 1930.
- 46 Extraordinary meeting of shareholders, 9th December, 1930.
- 47 Memorandum and Articles of Association of Star Paper Mills Limited (1932).
- 49 Cf. WPTR 1920, p. 244.
- 50 The Barnsley Chronicle, 16th September, 1893.
- 51 Very scanty information is available for the early years of the Barnsley mills as papers relating to the pre-1930 period have disappeared. A large part of the earliest material was probably destroyed when the mill caught fire in 1913. The details which appear here have been obtained from the Barnsley mills' archives, from Björn Sucksdorff's account written in 1934; also, KYA Papers concerning the purchase of Star and Barnsley, The report prepared in the autumn of 1930 by the receivers of the bankrupt Yorkshire Paper Mills. Also WPTR 1930, p. 578, 1838, 1388, 1316.

- 52 KYA Correspondence between H. Reeve Angel and Ahlman, 17th November, 1930.
- 53 Meeting of Directors, 9th December, 1930.
- 54 Meeting of Directors, 16th January 1931; KYA Board, 19th December, 1930 and 16th January, 1931.
- 55 KYA Erik Palmgren's correspondence with Kymmene's head office, 1931—1932.
- 56 Information concerning Barnsley has been mainly obtained from reports written by Björn Sucksdorff and now in the mill's archives.
- 57 Barnsley's archives. Sucksdorff to Palmgren, 17th February, 1932.
- 58 No net result is shown for 1931 because the accounting year changed, the capital was reorganised, and Yorkshire Paper Mills were purchased by Star.
- 59 Pollard, *The Development of the British Economy*, pp. 223—229; Richardson, *The Economic Significance of the Depression in Britain*. *Journal of Contemporary History*, Vol. 4 Number 4, pp. 3—19.
- 60 KYA Notes on the operation of Y.P.M. during 1932.
- 61 Meeting of Directors, 15th July, 1932.
- 62 KYA Board, 26th May, 1932 and 19th August, 1932.
- 63 KYA Board, 19th August, 1932 discussed Hermann's report on the English market situation, signed 13th August, 1932.
- 64 Meeting of Directors, 6th December, 1932; KYA Ahlman's memorandum to the board of Kymmene. 7th June, 1933.
- 65 Meeting of Directors, 25th August, 1933.
- 66 KYA Palmgren's correspondence.
- 67 Meeting of Directors, 29th May, 1933 and 23rd June, 1933.
- 68 Meeting of Directors, 23rd June, 1933.
- 69 Meeting of Directors, 26th July, 1934; 3rd October, 1934.
- 70 Meeting of Directors, 7th June, 1934.
- 71 Meeting of Directors, 18th June, 1934, 26th July, 1934.
- 72 Meeting of Directors, 15th May, 1935.
- 73 Meeting of Directors, 17th July, 1935.
- 74 Meeting of Directors, 17th July, 1935.
- 75 Meeting of Directors, 27th February, 1936.
- 76 Statistics of Production, 1937 & 1938.
- 77 Meeting of Directors, 27th September 1938; Chairman's report 1938; Production statistics 1938.
- 78 Ahvenainen, *Från pappersbruk till storföretag*, p. 269.
- 79 Meeting of Directors, 30th January, 1936.
- 80 Meeting of shareholders, 22nd April, 1936.
- 81 Meeting of Directors, 12th September, 1940; Meeting of shareholders, 29th November, 1940.
- 82 KYA Hague to Wiklund, 21st August, 1940.
- 83 Meeting of Directors, 17th December, 1940.
- 84 Kymmene's annual report for 1936.
- 85 KYA Star, Memoranda De 2 'Leveranser in ton under åren 1934—1939 från Kymmene och dotterbolagen av trämassa, sulfit- och sulfatcellulosa till Star bolaget.'
- 86 Meeting of Directors, 2nd October, 1939.
- 87 Meeting of Directors, 24th January, 1941.
- 88 Meeting of Directors, 18th December, 1939.
- 89 KYA Star, Memoranda De 1.
- 90 KYA Star, Memoranda De 2 ''Leveranser i ton under åren 1934—1939 från Kymmene och dotterbolagen av trämassa, sulfit och sulfatcellulosa till Star bolaget''.
- 91 Invoices for pulp obtained from U.S.A. and Canada, 1940—1947.
- 92 Statutory Rules and Orders, 1939, No. 1030. Emergency Powers (Defence), Raw Material (Paper). The Control of Paper (No. 1). Dated 2nd September, 1939.
- 93 Statutory Rules and Orders 1939, The Control of Paper (No. 4), dated 26th October, 1939.
- 94 Board of Trade, Concentration of Production. 1941.
- 95 Meeting of Directors, 17th October, 1941, 14th January, 1942.
- 96 Meeting of Directors, 22nd October, 1942.
- 97 Meeting of Directors, 14th February, 1943.
- 98 The Chairman's Address, May 1952.
- 99 There is a lengthy reference to this and several other difficulties encountered by the paper industry made by the Chairman in his address at Star's annual general meeting. Also WPTR, 6th March, 1947.

- 100 Meeting of Directors, 11th July, 1947.
- 101 Meeting of Directors, 15th March, 1946.
- 102 Chairman's Address, May 1949.

III Star in the Fifties, pp. 80—90

- 1 Meeting of Directors, 15th May, 1947.
- 2 Meeting of Directors, 4th November, 1947.
- 3 KYA, Board, 30th March, 1948.
- 4 Meeting of Directors, 15th January, 1946.
- 5 Meeting of Directors, 12th February, 1946.
- 6 KYA Petrie to Ekholm, 7th April, 1955. Chairman's Report, 1955.
- 7 According to the minutes of the Board of Directors and the annual reports.
- 8 Statistics for net production, 1952—1956.
- 9 Memorandum 'Some considerations involved in the alignment of sales policy etc.' (1952).
- 10 KYA Exchange of correspondence between Ekholm and Reeve Angel, September and October, 1954.
- 11 Meeting of Directors, 15th March, 1957.
- 12 Principally based on annual reports and minutes of board meetings.
- 13 Production Statistics 1950—1955.
- 14 KYA Board 15th September, 1948.
- 15 Meeting of shareholders, 10th May, 1955.
- 16 KYA Reeve Angel to Ekholm, 14th June, 1954; KYA Board, 15th September, 1948.

Appendix No. 1

Balance Sheets 1930—1939

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Liabilities	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939
Share Capital (paid)	100000	193712	225000	225000	225000	225000	225000	225000	225000	225000
Reserves	—	—	—	—	—	—	—	—	—	20000
Creditors	251399	314869	359985	373603	429425	564240	471879	593927	463948	446128
Balance	7207	—	—	—	—	—	—	14064	24132	35570
Liabilities (total)	358606	508581	584985	598603	654425	789240	696879	832991	713080	726698
Assets										
Land, buildings, water rights, machinery:										
Blackburn	222000	238088	243363	235772	229532	231740	284535	288613	274383	274383
Barnsley		72688	85680	90099	104539	123087	123170	124684	122202	115916
Current Assets	136606	189745	211855	190108	188020	262694	265454	419694	316495	336399
Profit and Loss Account	—	8060	44087	82624	132334	171719	23720	—	—	—
Assets (total)	358606	508581	584985	598603	654425	789240	696879	832991	713080	726698
Loss	—	8060	36027	38537	49710	39385	23720			
Profit								37784	10068	31438

Balance Sheets 1940—1949

Liabilities	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949
Share Capital	450000	450000	450000	450000	450000	450000	450000	450000	450000	450000
Reserves	40000	50000	85000	120000	160000	170000	170000	170000	258275	244775
Creditors	56034	40189	50609	64685	68665	77776	93861	111854	156427	118383
Provisions			24375	39375	74375	99850	104850	94851	48850	16887
Balance	37985	34231	24047	21606	24364	22590	28835	30980	40209	2157
Liabilities (total)	584019	574420	634031	695666	777404	820216	847546	857685	953761	832202
Assets										
Land, buildings, water rights, machinery										
Blackburn	243409	230782	220755	208870	194006	163550	127893	144000	214612	274177
Barnsley	109661	109234	104401	100130	101024	94910	87485	84500	80457	73819
Current Assets	230996	234404	308875	386666	482374	561756	632168	629185	658692	484206
Profit and Loss Account										
Assets (total)	584019	574420	634031	695666	777404	820216	847546	857685	953761	832202
Loss										51552
Profit	31415	25187	21166	23417	67459	43226	41255	17173	24258	

Balance Sheets 1950—1960

Liabilities	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Share Capital	450000	450000	450000	450000	450000	900000	900000	900000	1350000	1350000	1350000
Reserves	427775	770000	790000	897300	1047300	925000	1075000	1175000	875000	1020000	1200000
Creditors	265451	501978	345766	343604	409171	603717	348474	393404	557440	651900	711012
Revenue reserves & provisions	92219	708625	62909	63461	199262	465812	428874	315502	307620	362902	431287
Balance	9961	22427	17752	33119	31062	44867	62760	46255	37941	23272	56686
Liabilities (total)	1245406	2453030	1666427	1787484	2136795	2939396	2815108	2830161	3128001	3408074	3748985
Assets											
Land, buildings, water rights, machinery											
Blackburn	300638	370981	487650	500500	551860	732315	894842	1134832	1250852	1334013	1443346
Barnsley	81723	104748	188253	212193	231607	262152	316900	307425	296170	299832	384445
Current Assets	863045	1977301	990524	1074791	1353328	1944929	1603366	1387904	1580979	1774229	1921194
Assets (total)	1245406	2453030	1666427	1787484	2136795	2939396	2815108	2830161	3128001	3408074	3748985
Loss			84825								
Profit	208523	468316		140167	369185	649542	334816	275679	278684	212475	254564

Appendix No. 2

The Paper Production (Net) of Blackburn and Barnsley Mills

1930—1959

Year	Blackburn tons	Barnsley tons
1930	25851	—
1931	21890	4545
1932	29181	12498
1933	32069	10799
1934	31742	6479
1935	25258	11389
1936	30494	15023
1937	37613	17250
1938	23607	14576
1939	27993	14594
1940	18749	11650
1941	9967	9206
1942	5034	6467
1943	6300	3180
1944	8850	4593
1945	10004	6559
1946	14496	8030
1947	10148	6955
1948	10517	7004
1949	11612	9211
1950	13484	10782
1951	14249	11665
1952	9832	8419
1953	10615	9253
1954	16312	11564
1955	22566	12460
1956	19432	10280
1957	16471	11282
1958	18227	11239
1959	21807	11910

Appendix No. 3

**The Production Capacity of Newsprint Mills in the
United Kingdom 1928**

Mill	tons
Bowater's Paper Mills	48450
Clyde Paper Co. Ltd.	10200
Daily Telegraph Paper Mills	5610
Darwen Paper Mill Co. Ltd.	53550
Dixon (Peter) & Son Ltd.	66300
Donside Paper Co. Ltd.	20910
Empire Paper Mills Ltd.	47940
Fischer & Co. Ltd.	2550
Imperial Paper Mill Ltd.	204000
North Eastern Paper Mills	19380
Owen (Thos.) & Co. Ltd.	10200
Read (Albert E.) & Co. Ltd.	45900
Star Paper Mill Co. Ltd.	24480
Sun Paper Mill Co. Ltd.	18360
Yorkshire Paper Mills Ltd.	12750
(Total	652180)

Archives and Printed Books

Archive sources

Sources are individually mentioned in the footnotes. The following archives have been used in preparing this research:

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